

【症例】

60歳代女性

【現病歴】

人間ドックで肺野の結節影を指摘され、胸部CT検査施行。肺野に病変は認めず、前縦隔に1.5cm大の腫瘍性病変を指摘された。4カ月後の胸部CTでは、腫瘍は1.9cm大に増大しており、胸腺腫が疑われ、腹腔鏡下胸腺右半切除術施行された。

【検査所見】

<CBC>

WBC $4.76 \times 10^3 / \mu\text{L}$

RBC $4.38 \times 10^6 / \mu\text{L}$

HGB 14.3 g/dL

PLT $237 \times 10^3 / \mu\text{L}$

<電解質>

Na 142 mmol/L

K 4.6 mmol/L

CL 105 mmol/L

<生化学>

TP 6.3 g/dL

Alb 4.0 g/dL

AST 18 U/L

ALT 12 U/L

LDH 173 U/ μL

ALP 114 U/L

γ -GT 21 U/L

CRE 0.65 mg/dL

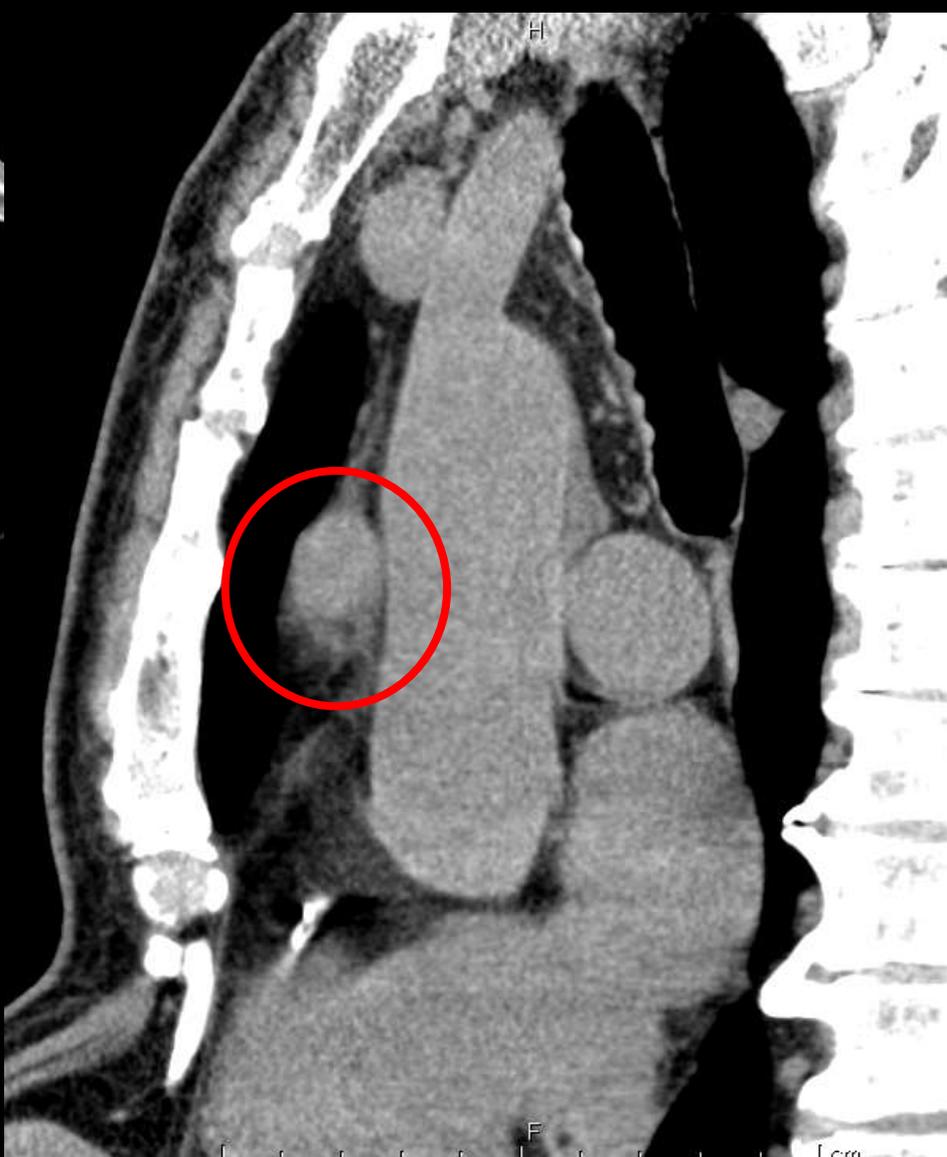
CRP 0.03 mg/dL

Glu 150 mg/dL

HbA1c 6.8 %

抗AChR抗体 ≤ 0.2 nmol/L

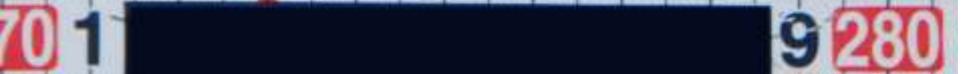
CT所見



前面

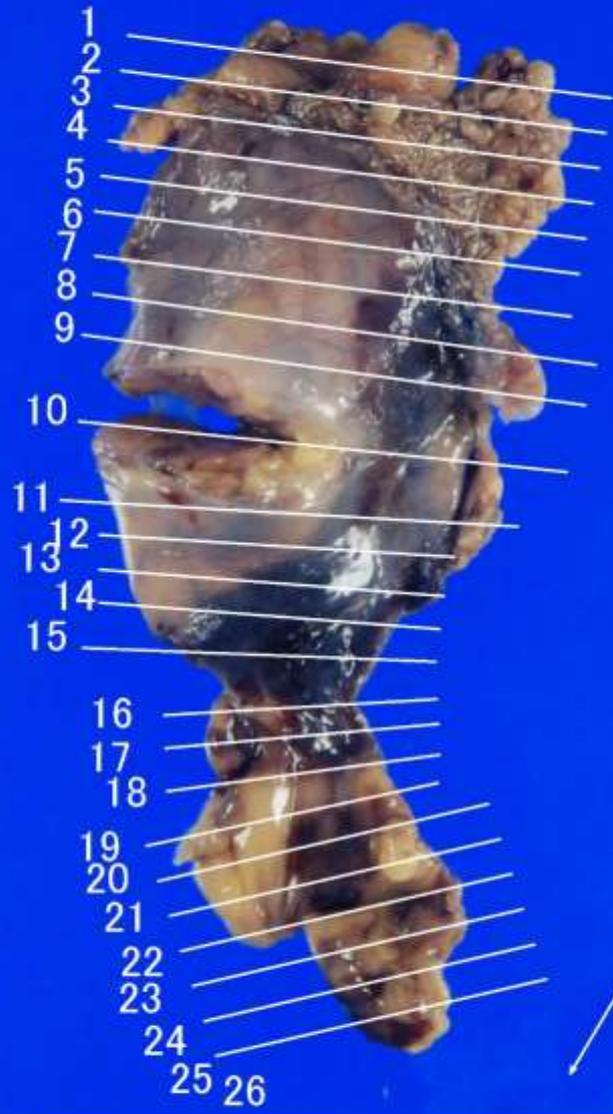


12.5x4.5x1.5cm



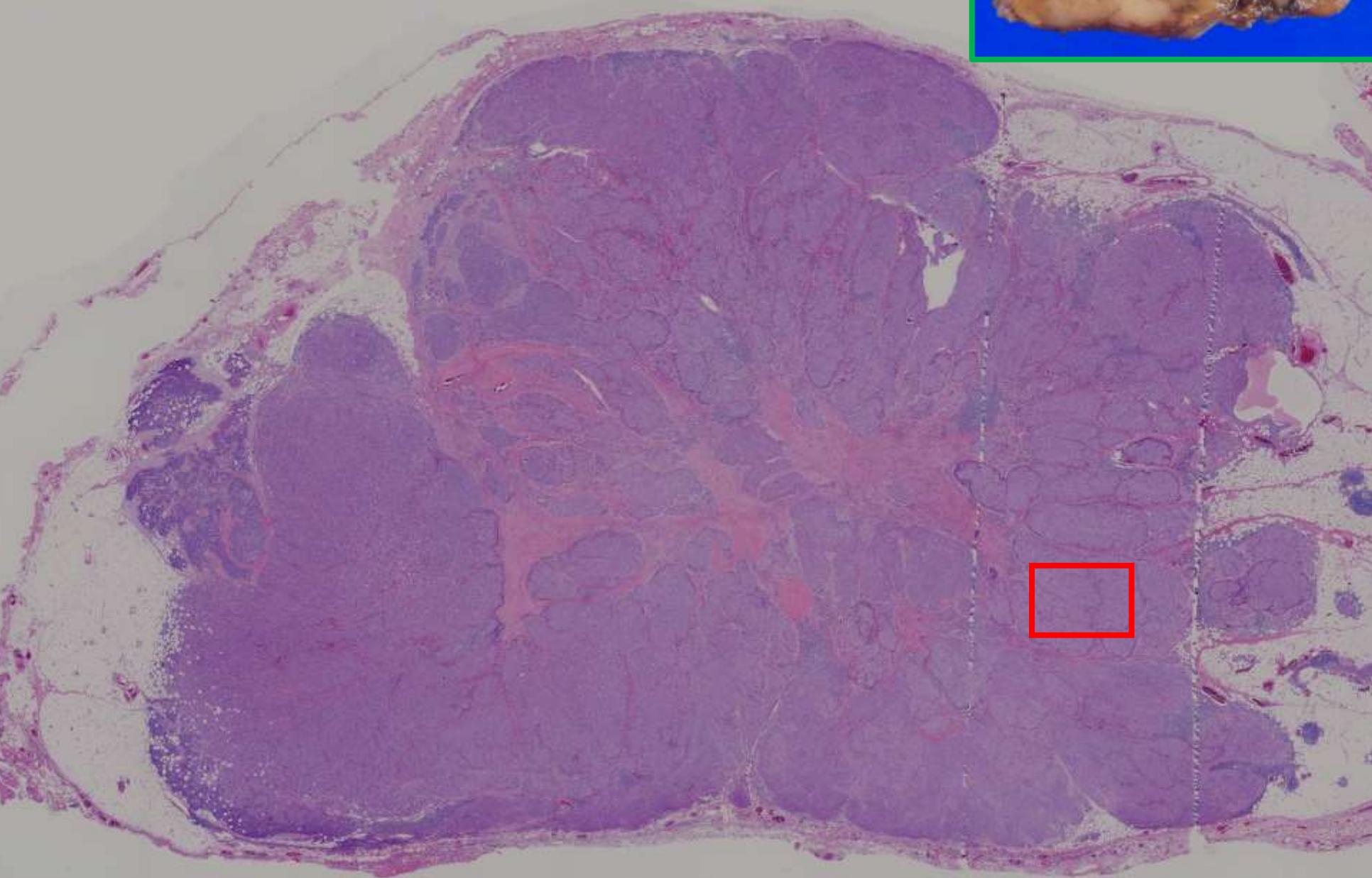
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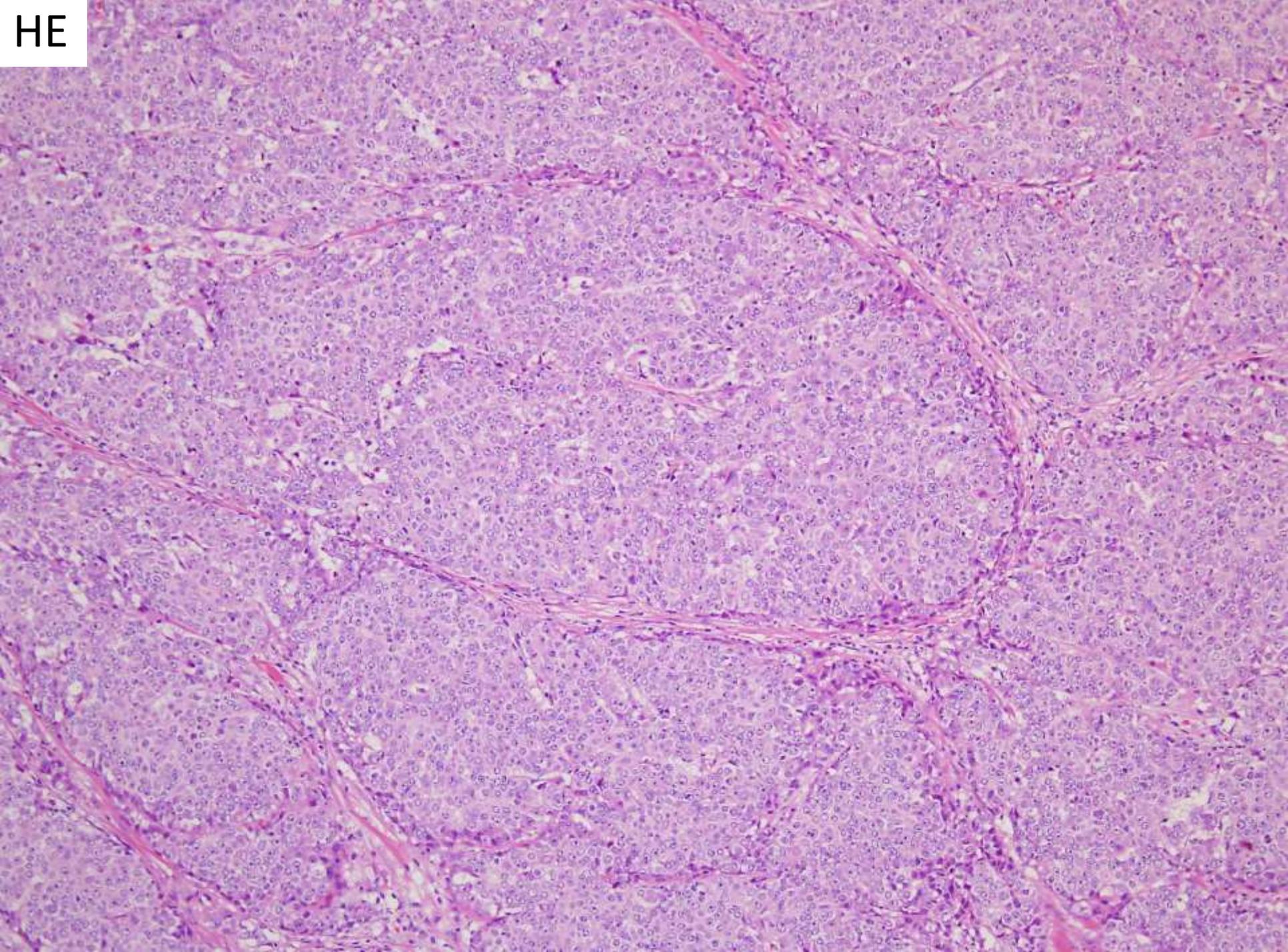




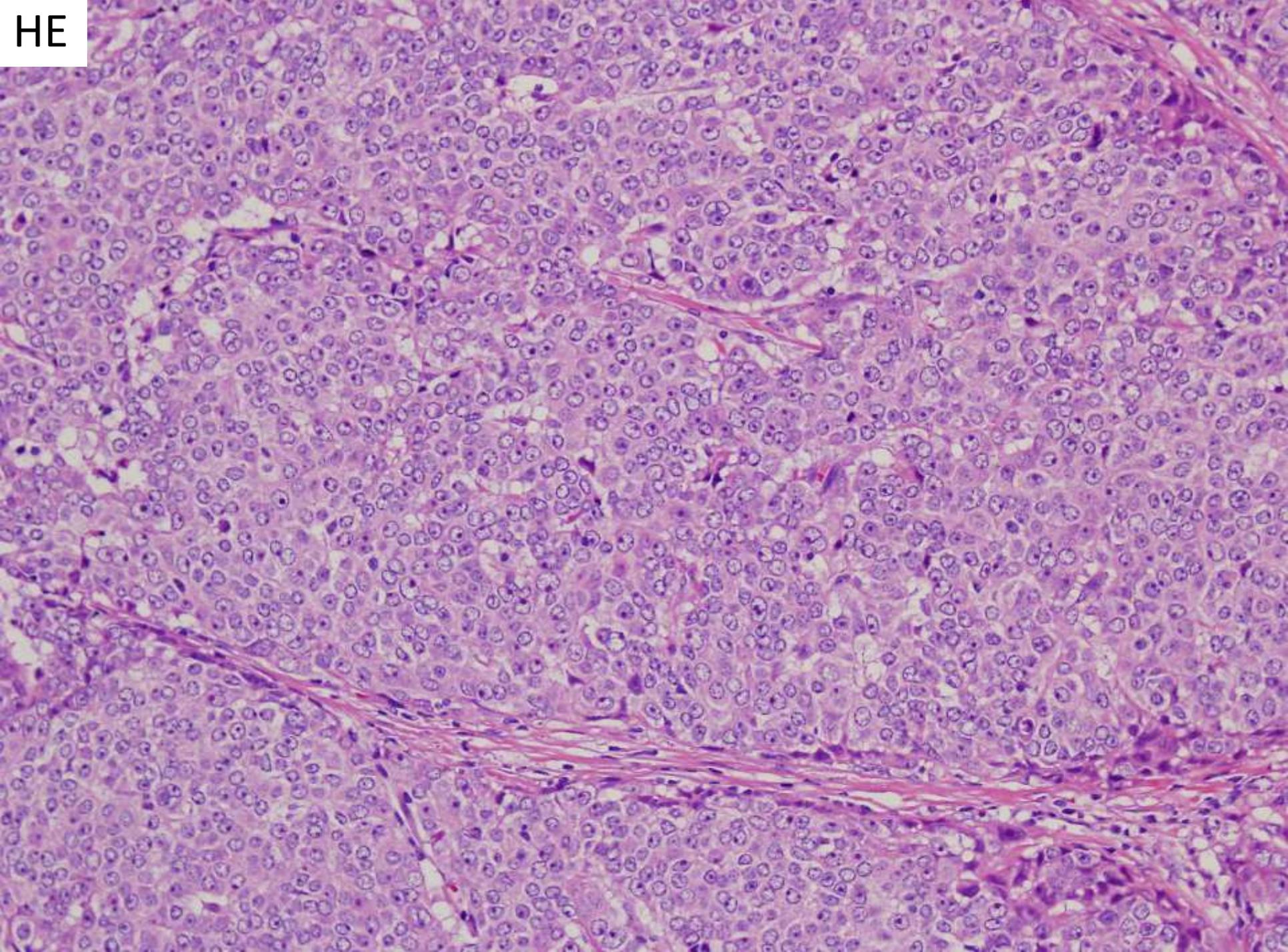
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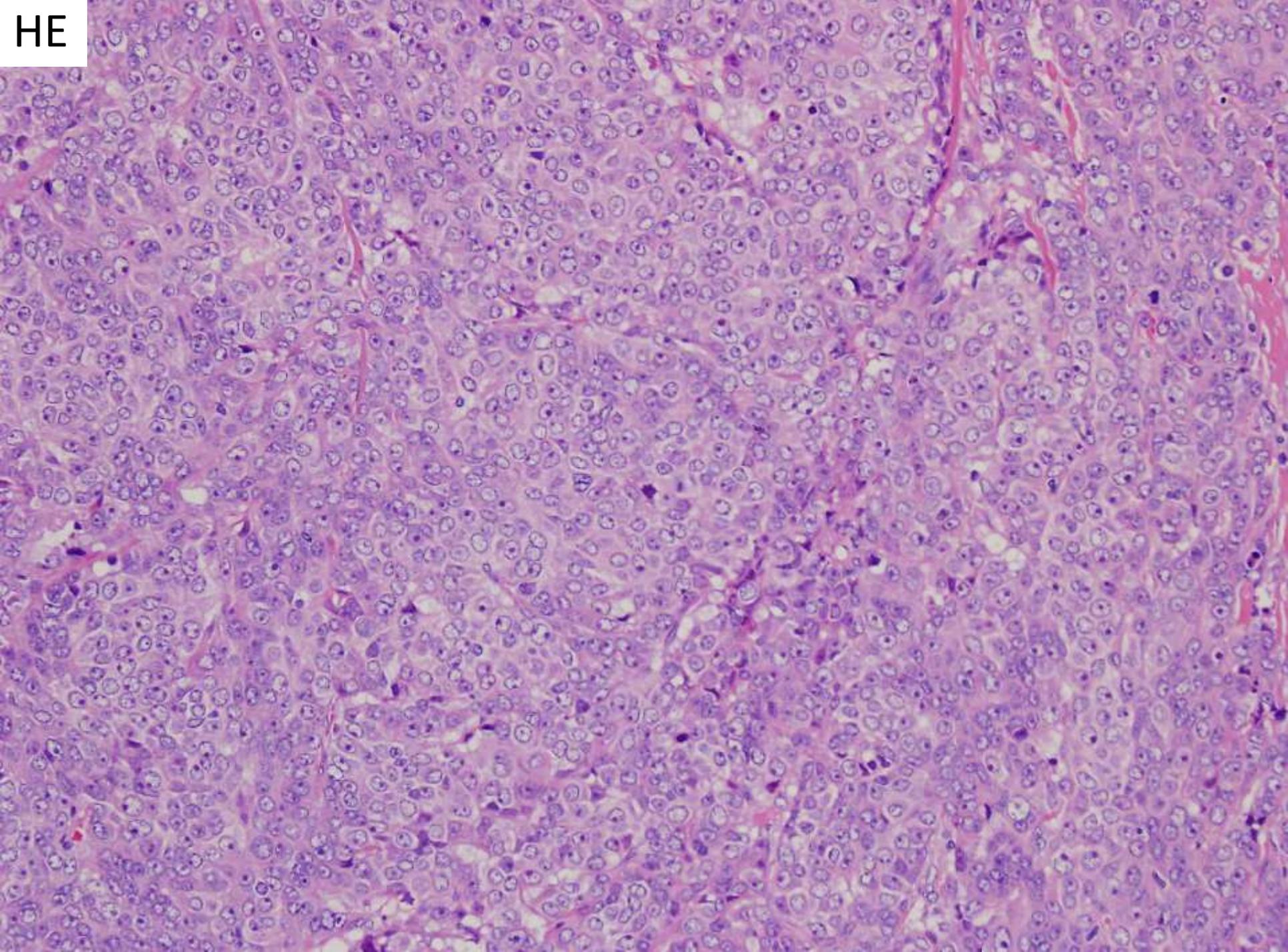
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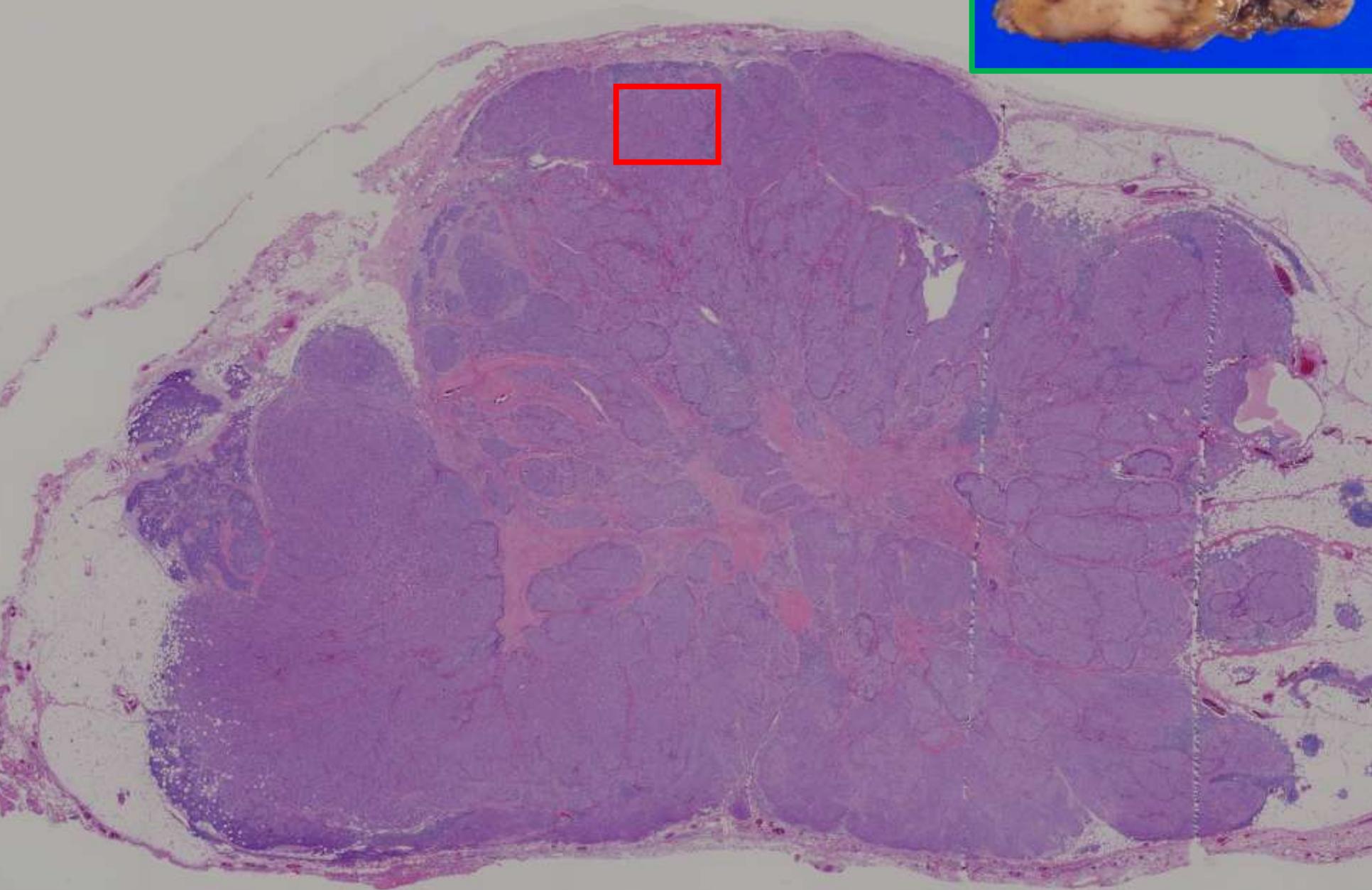
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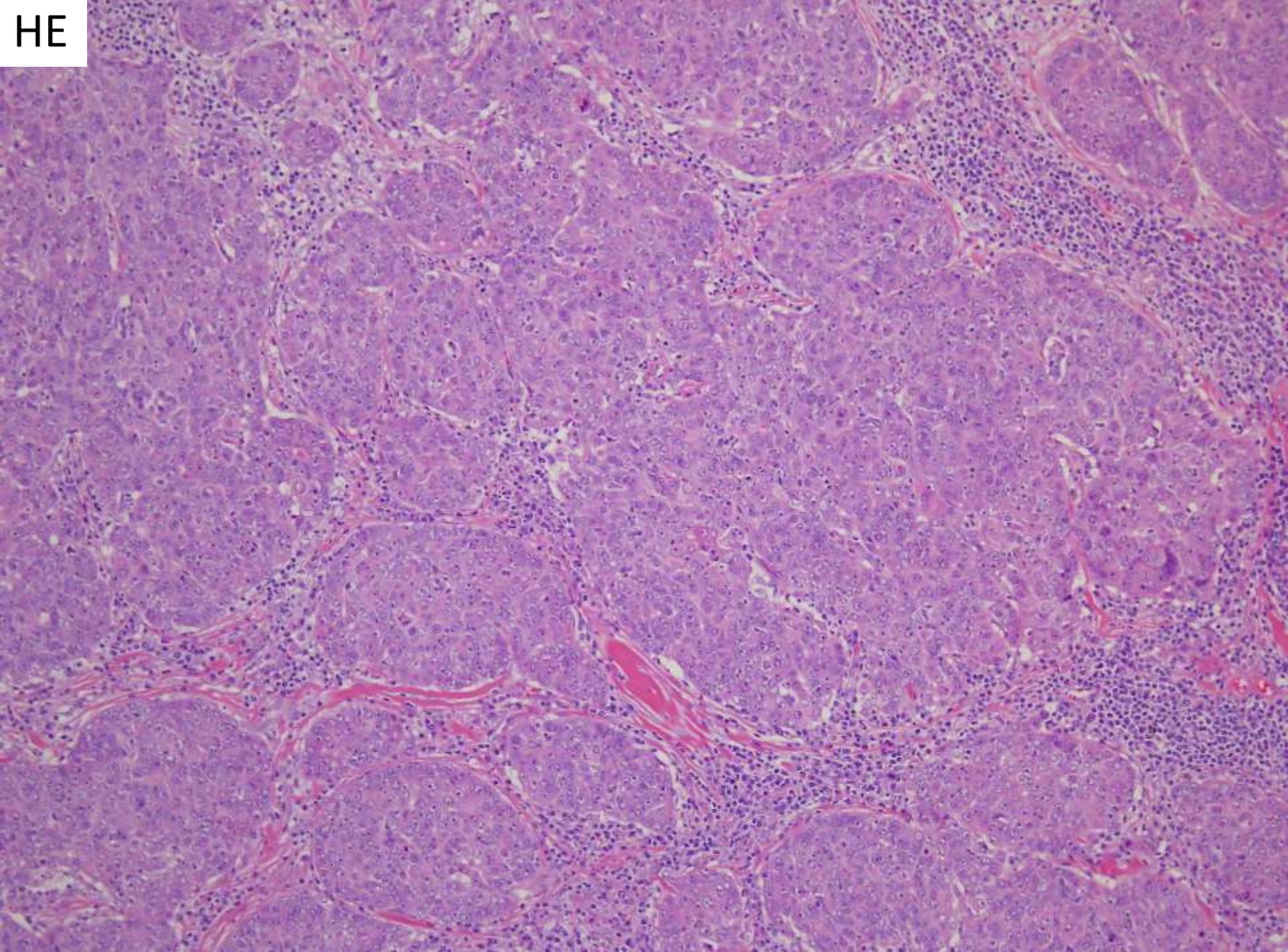
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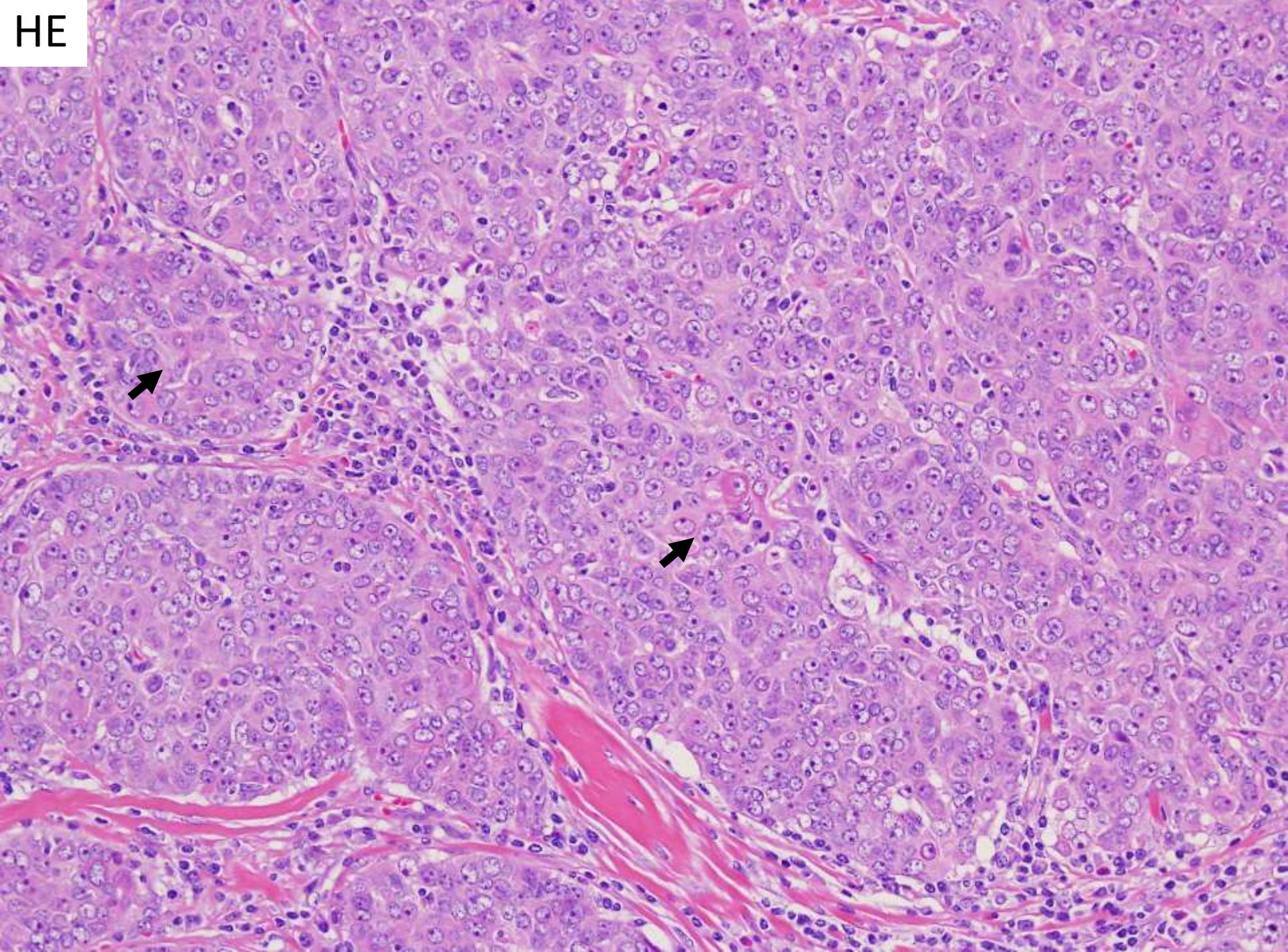
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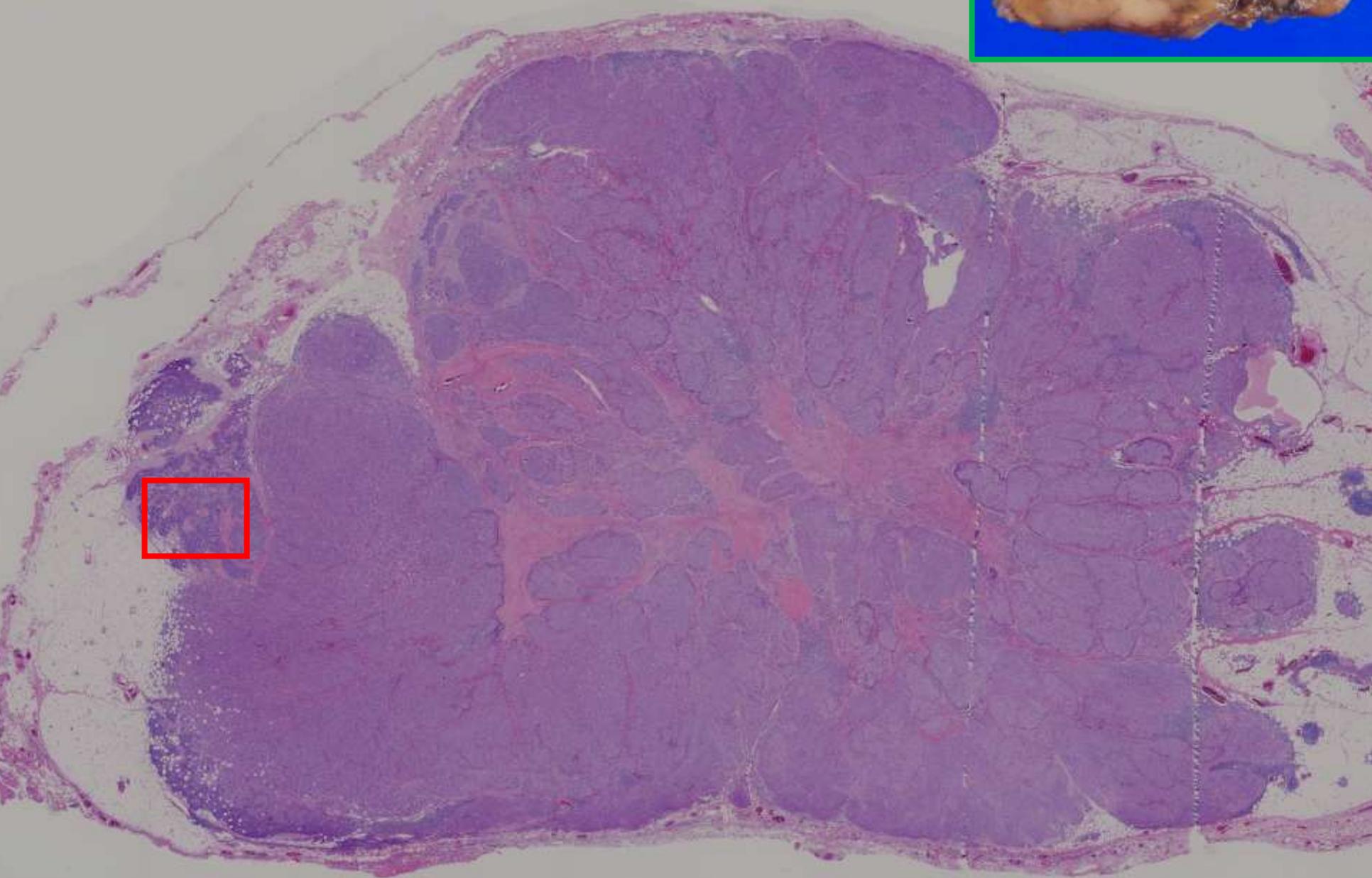
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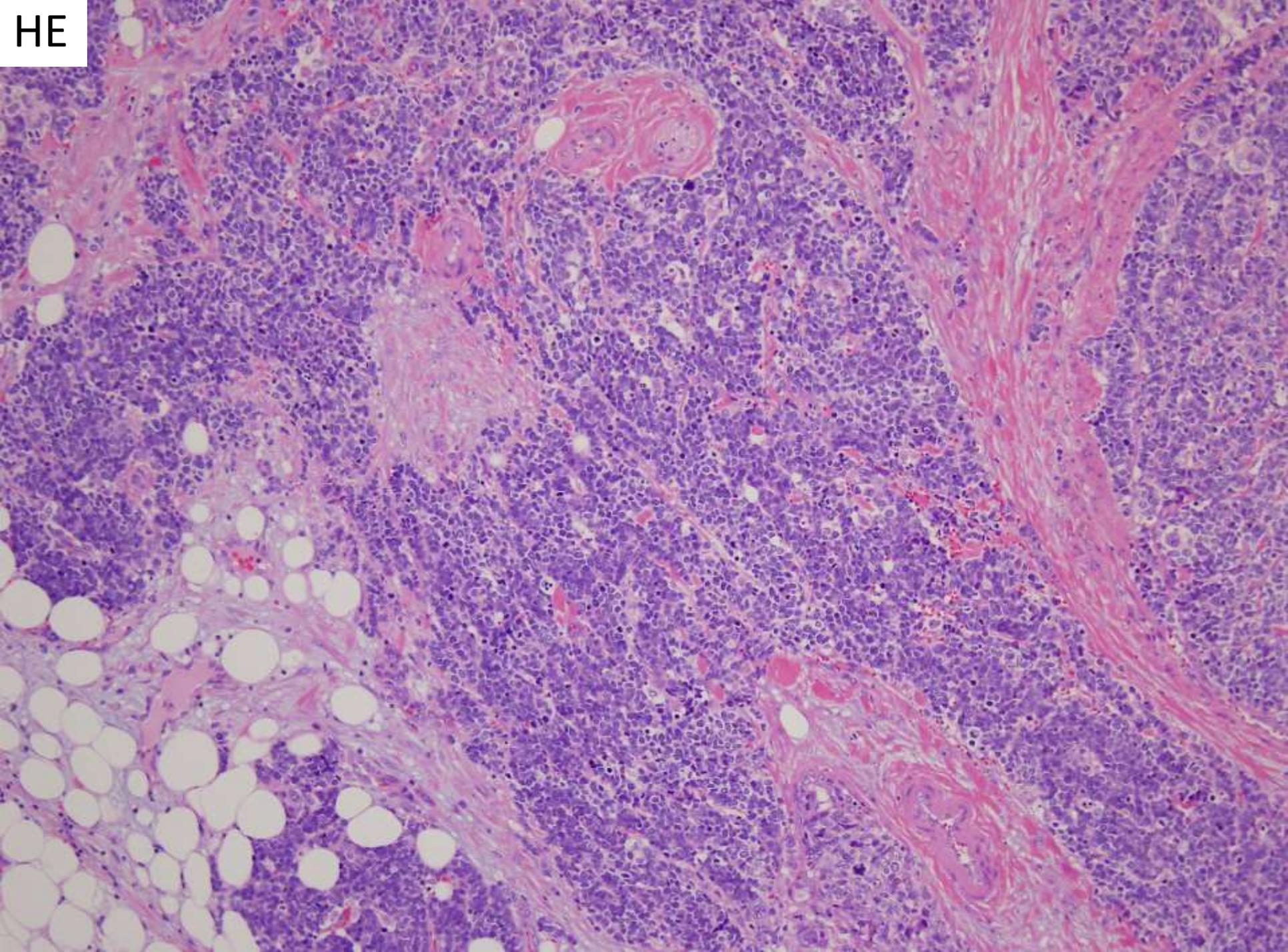
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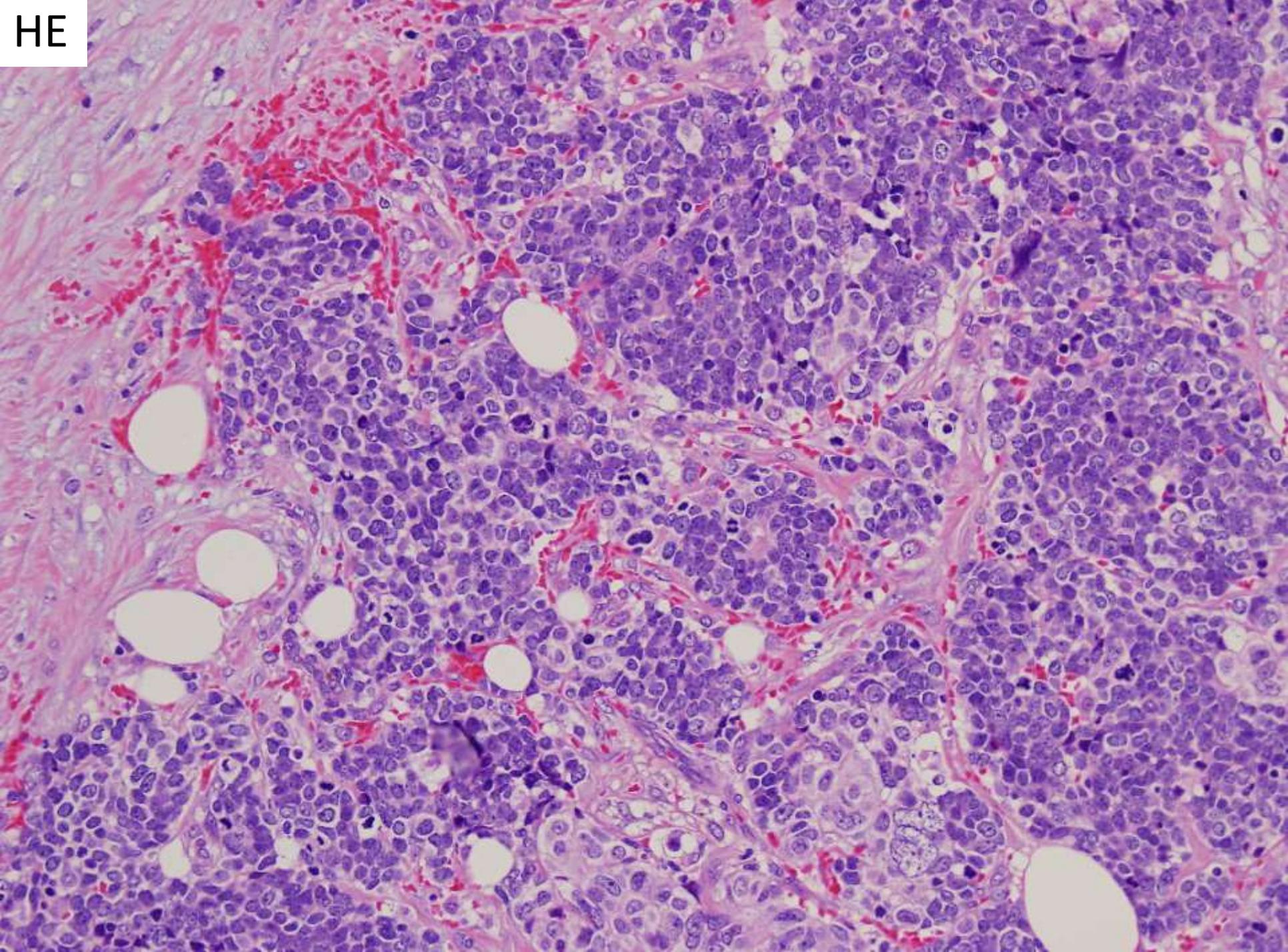
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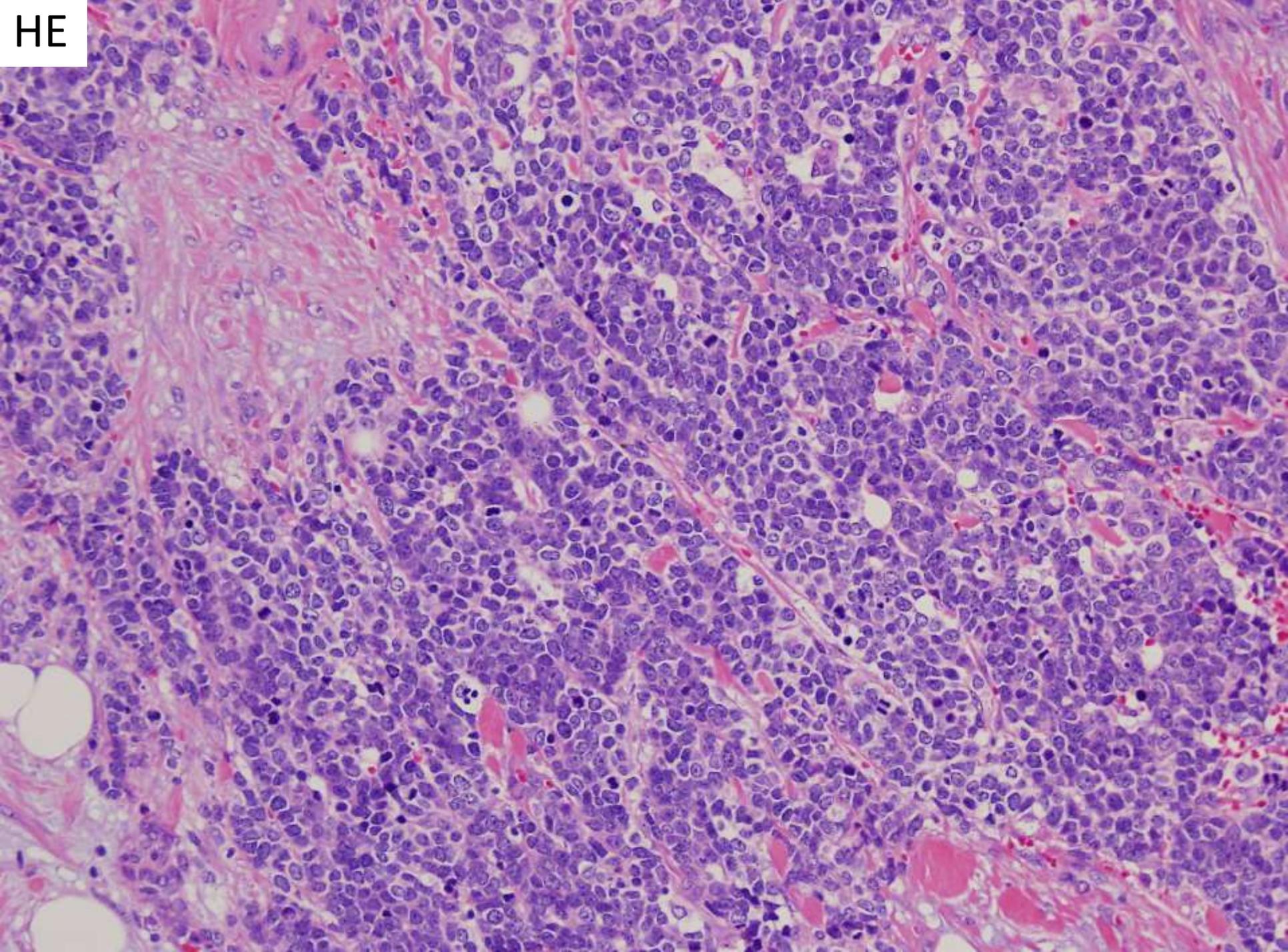
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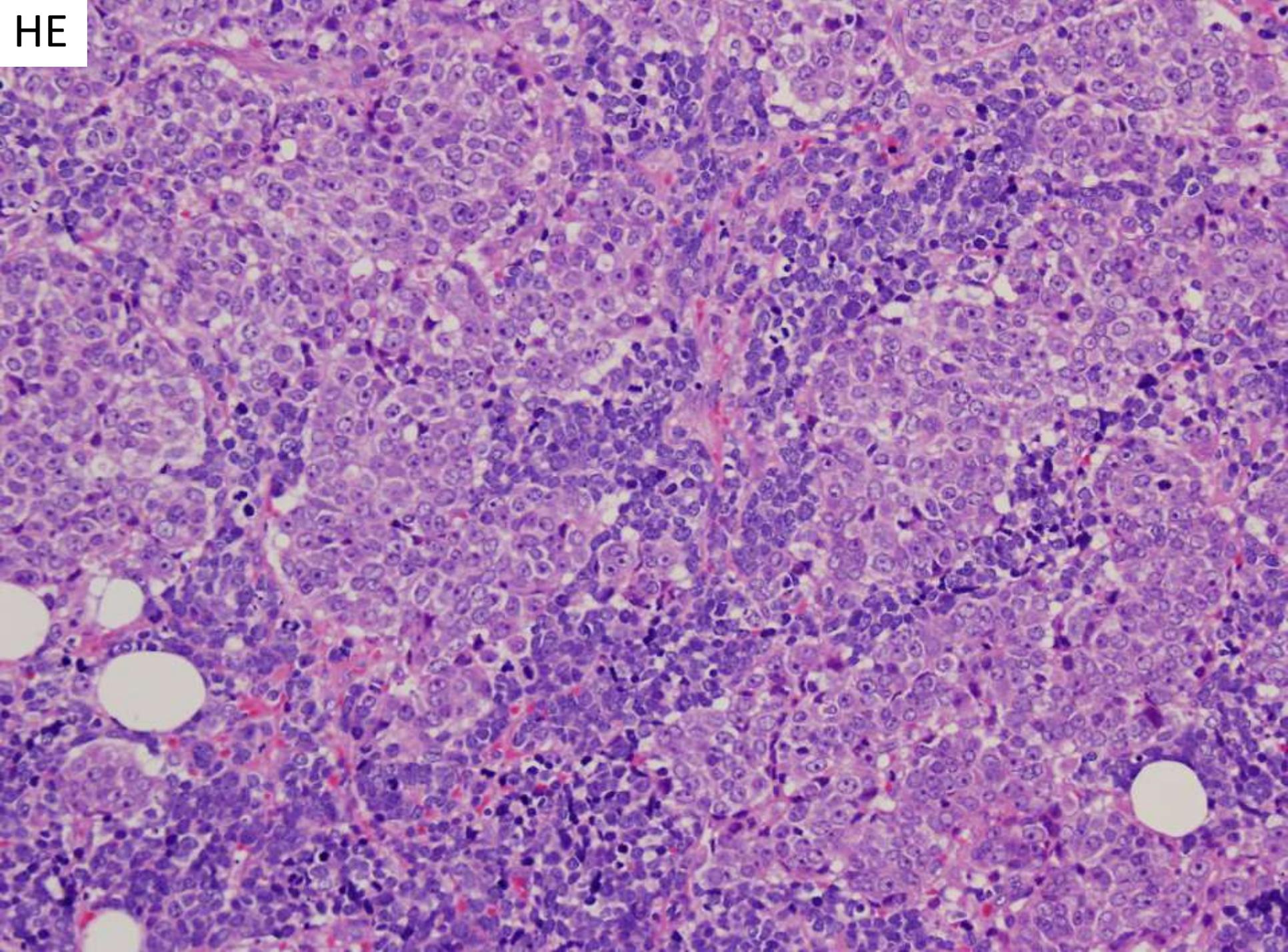
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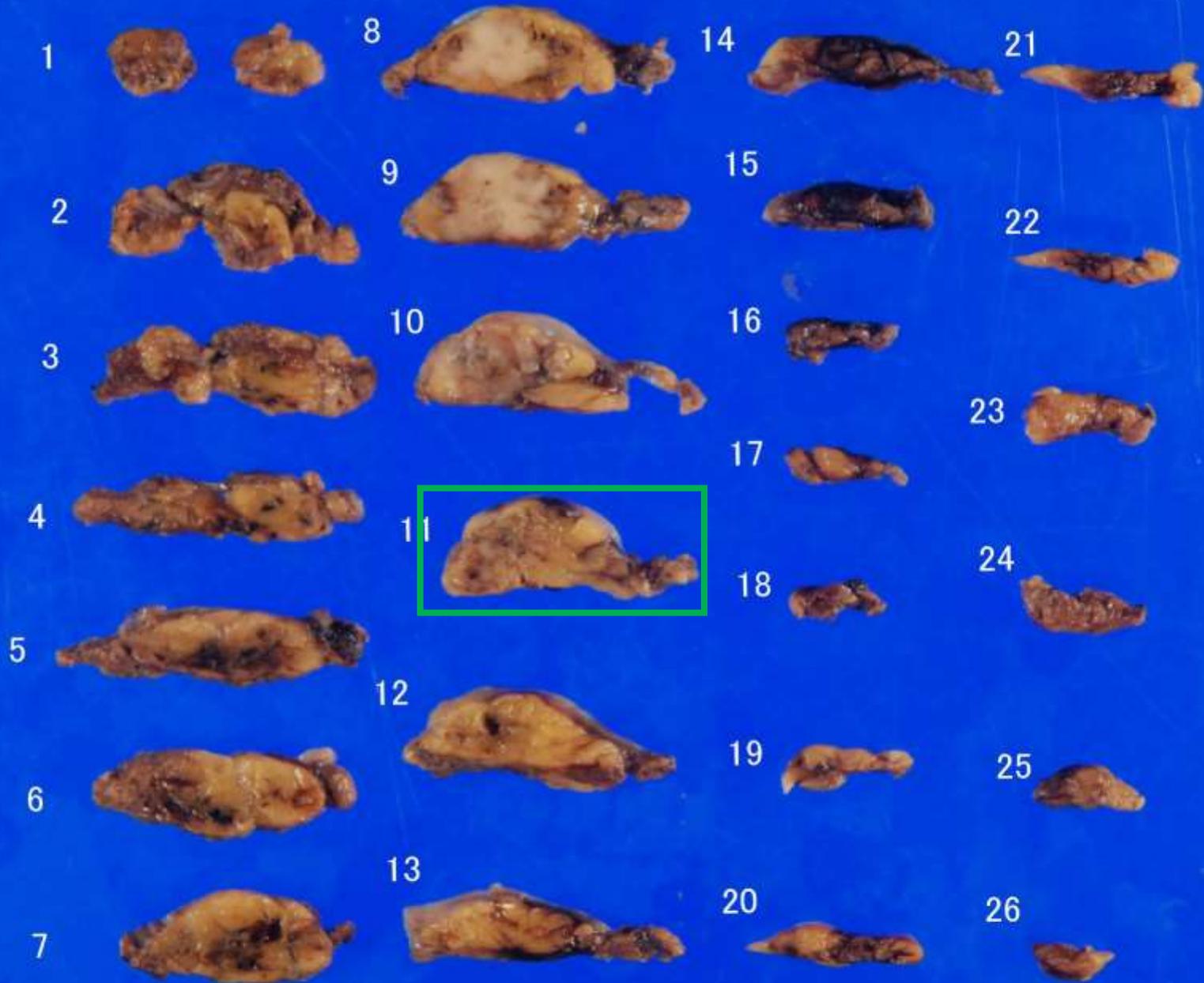


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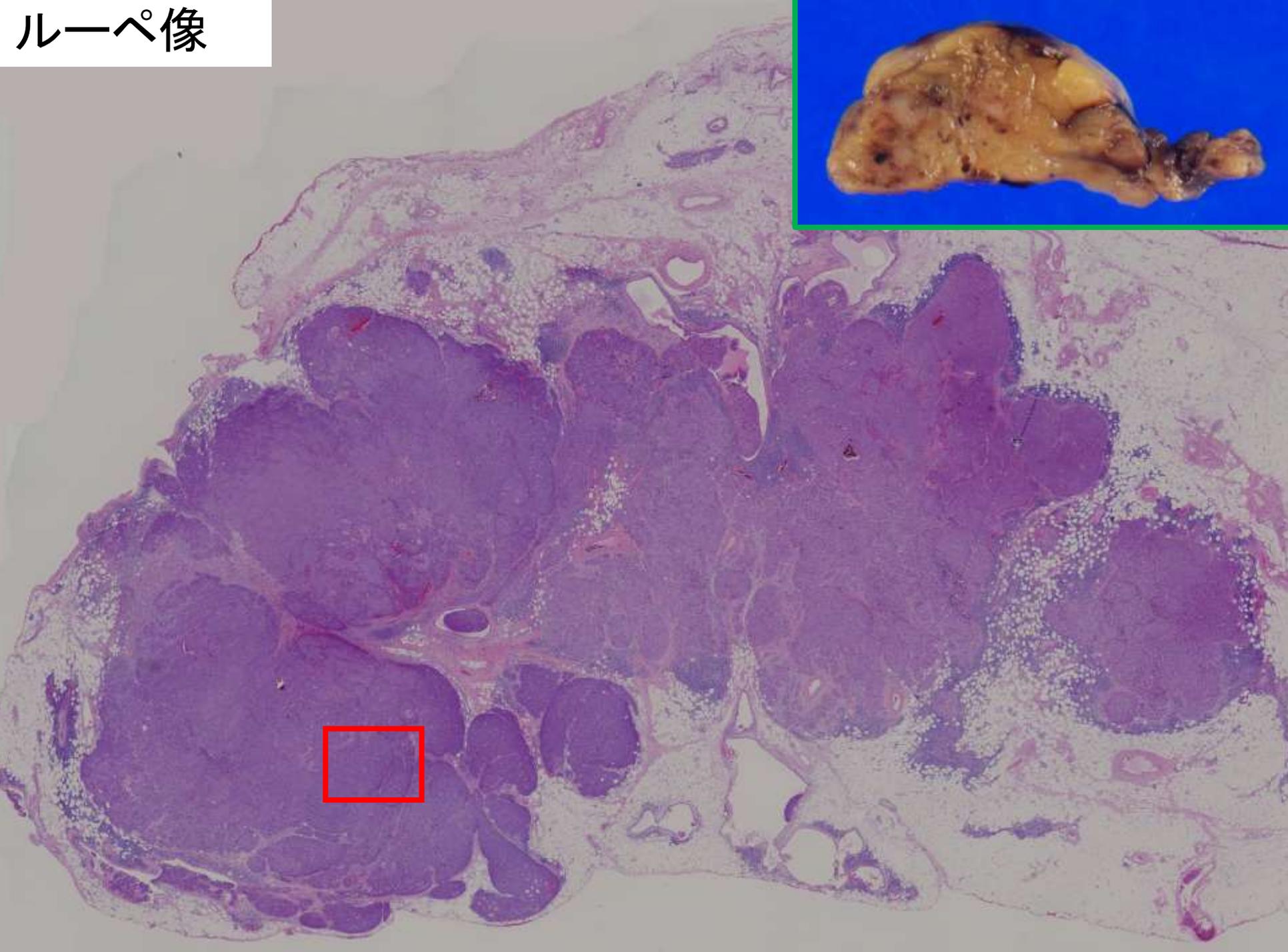


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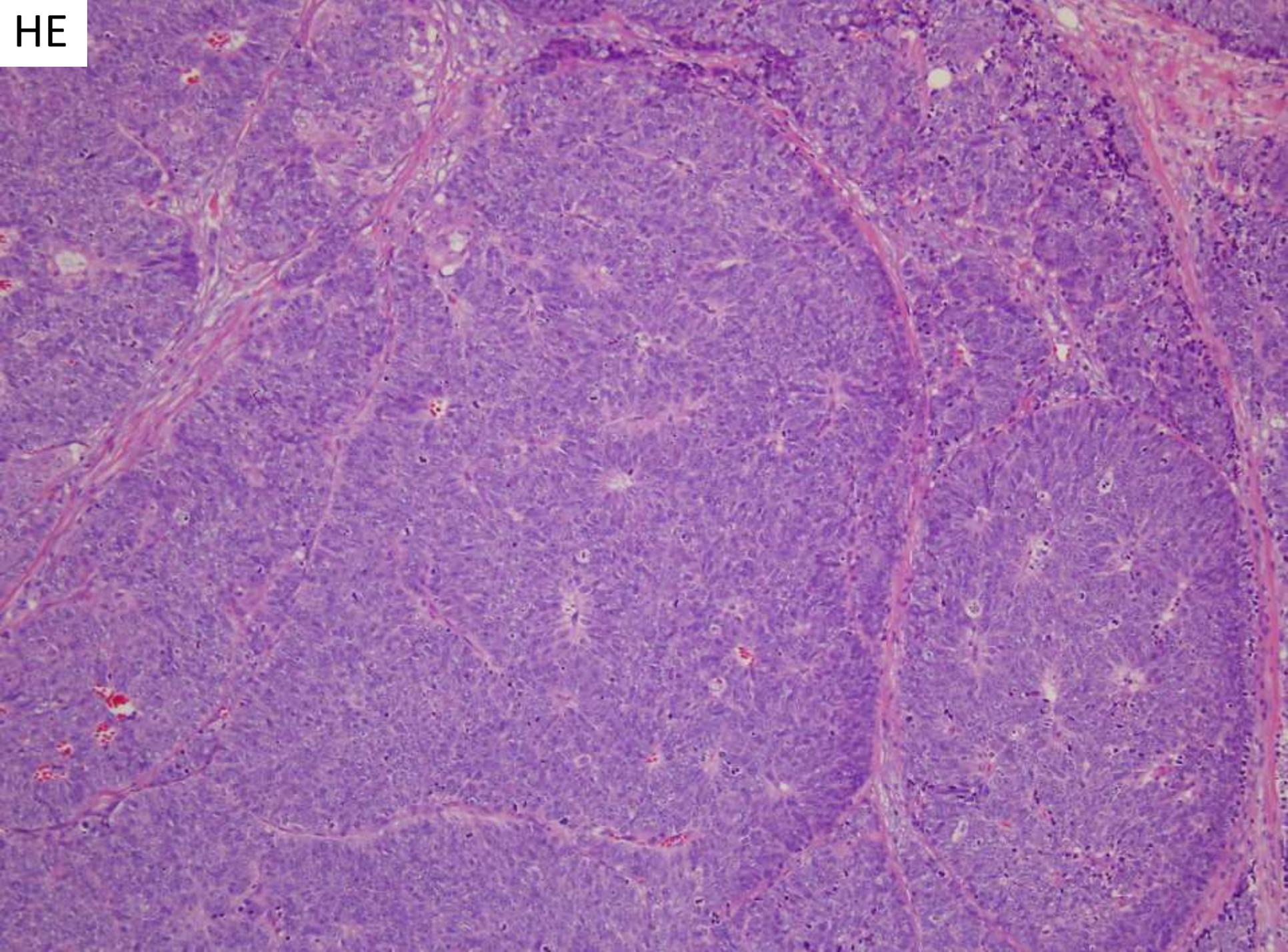




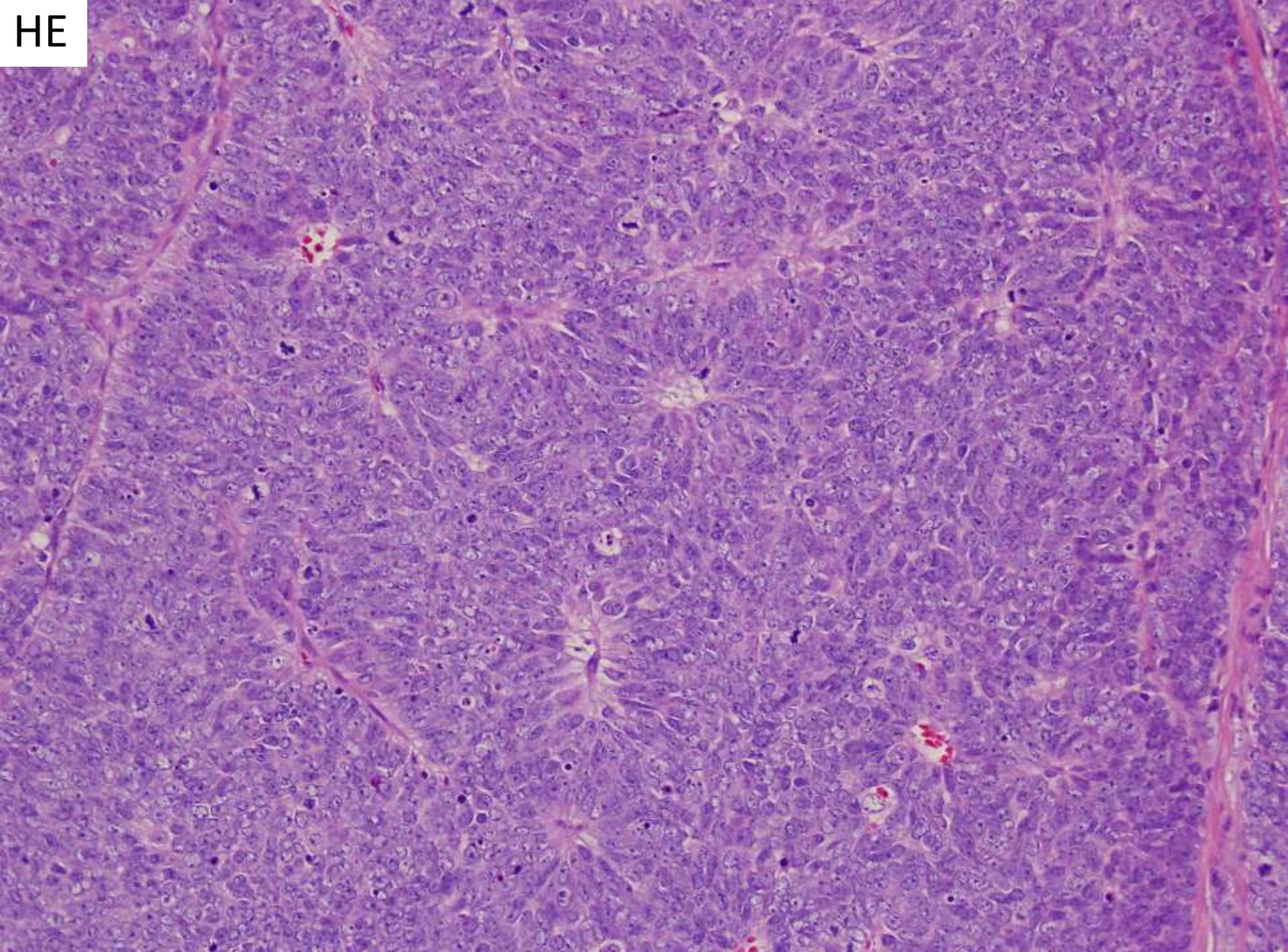
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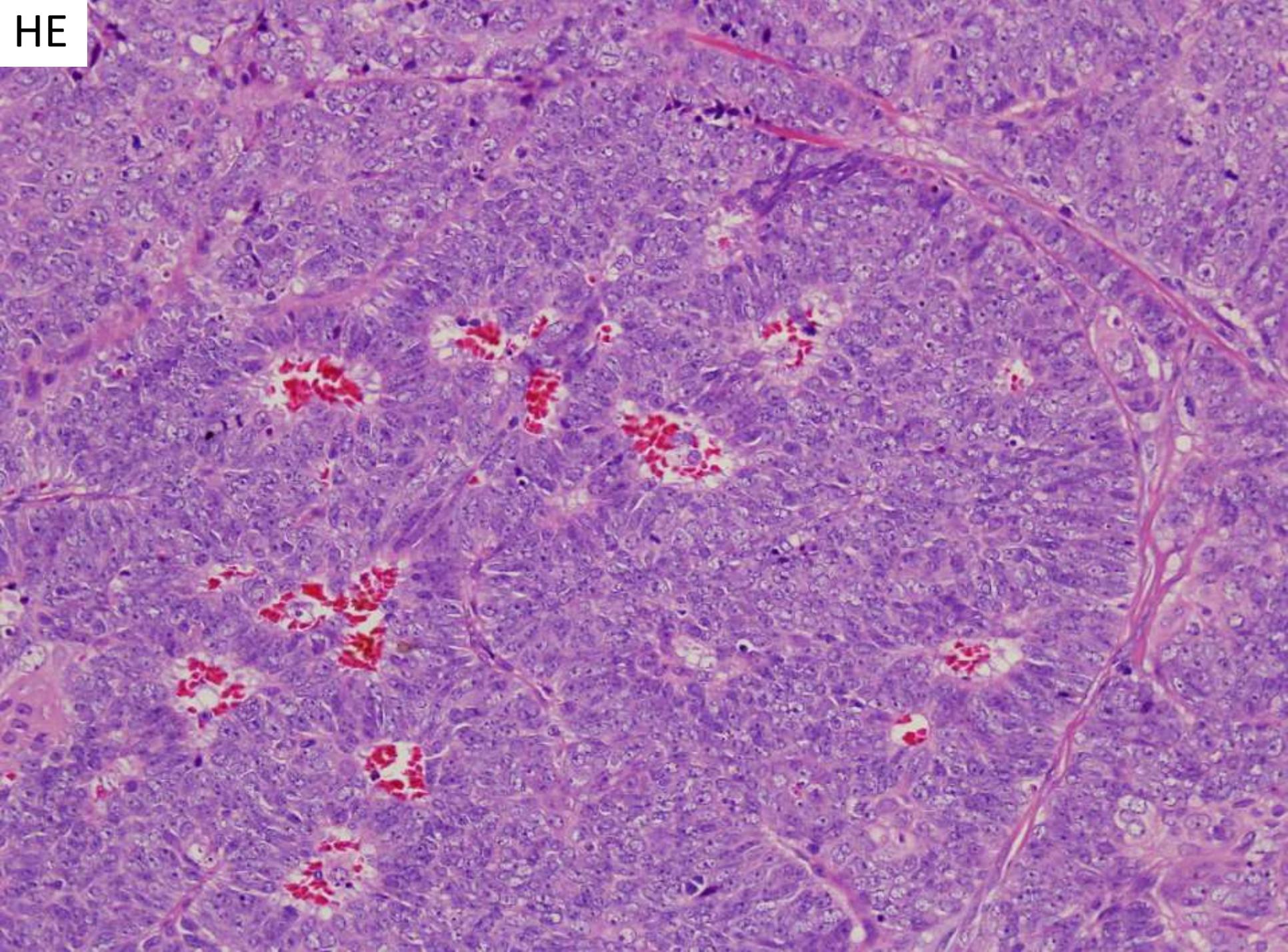
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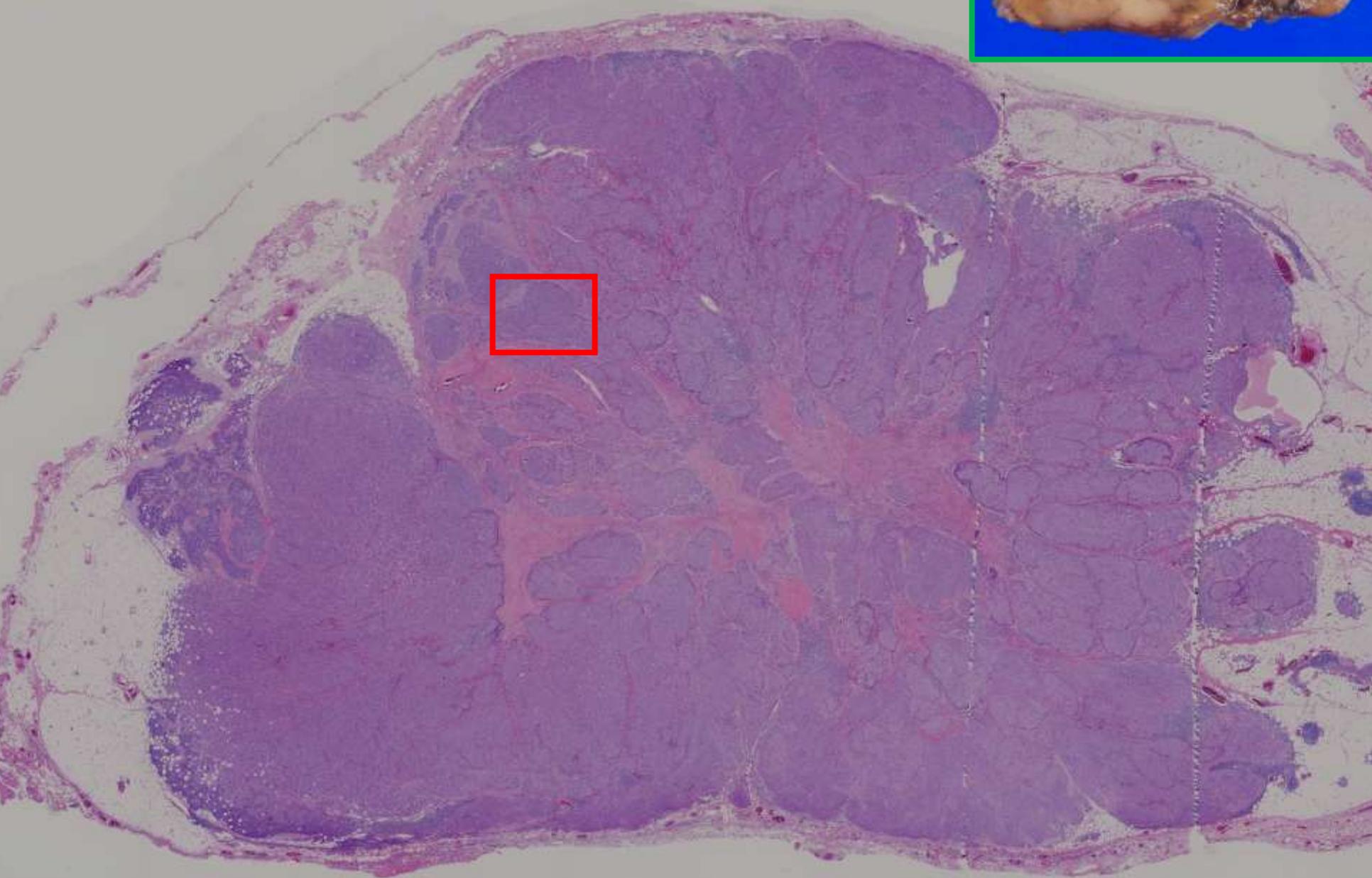
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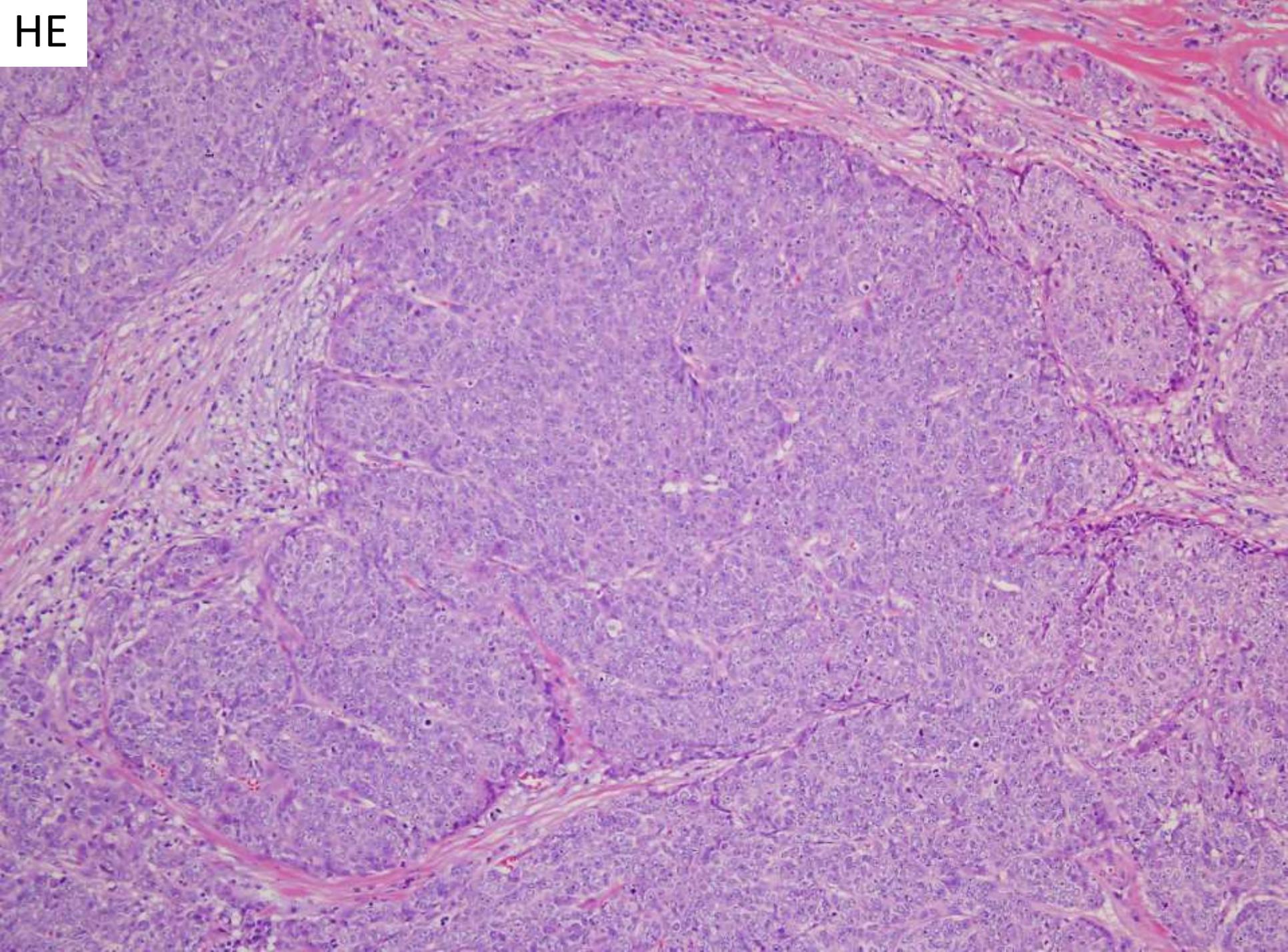
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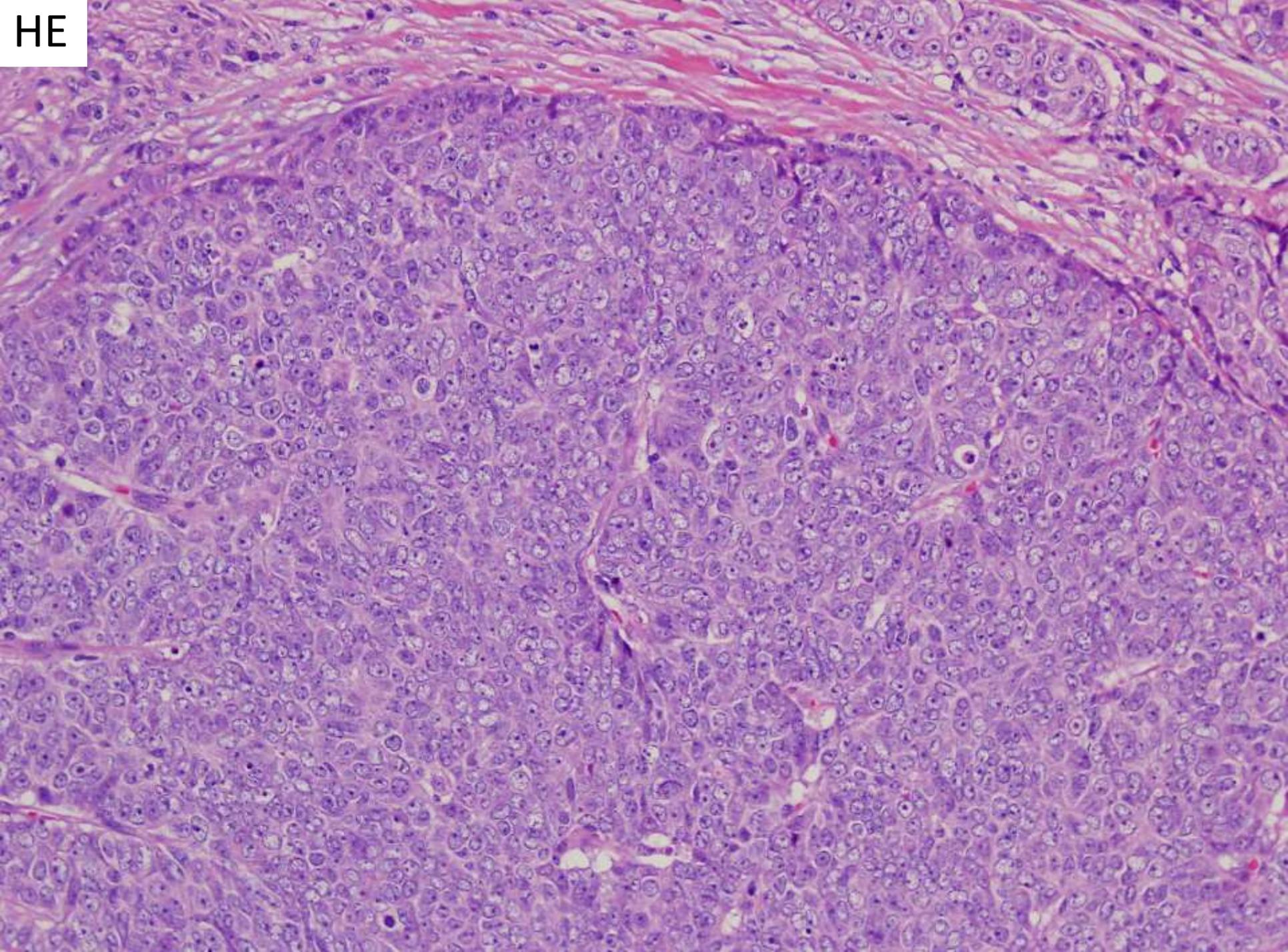
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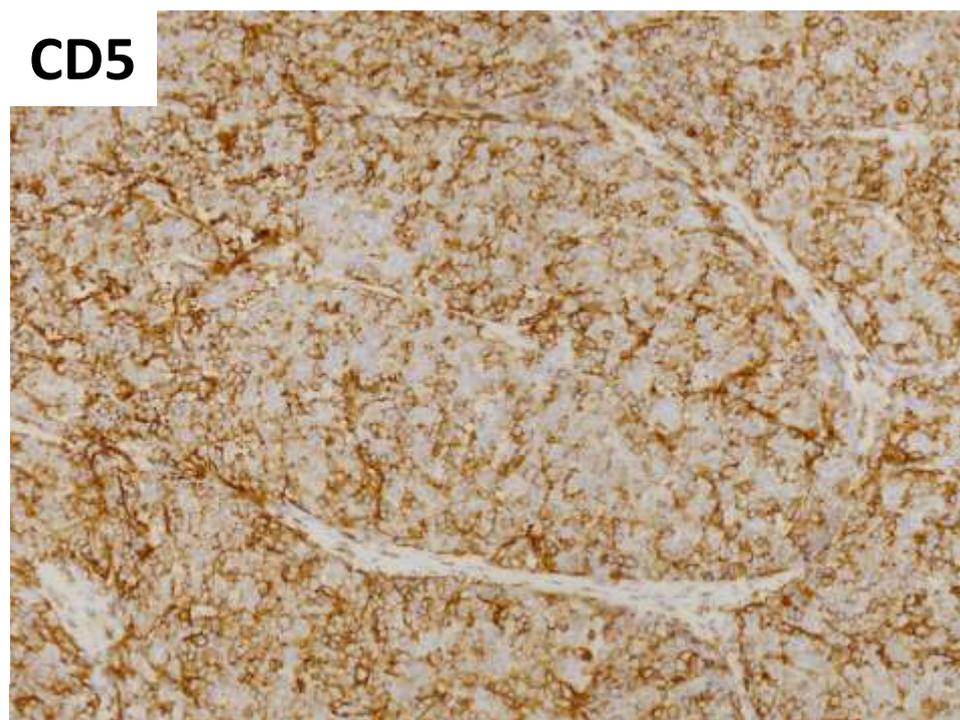
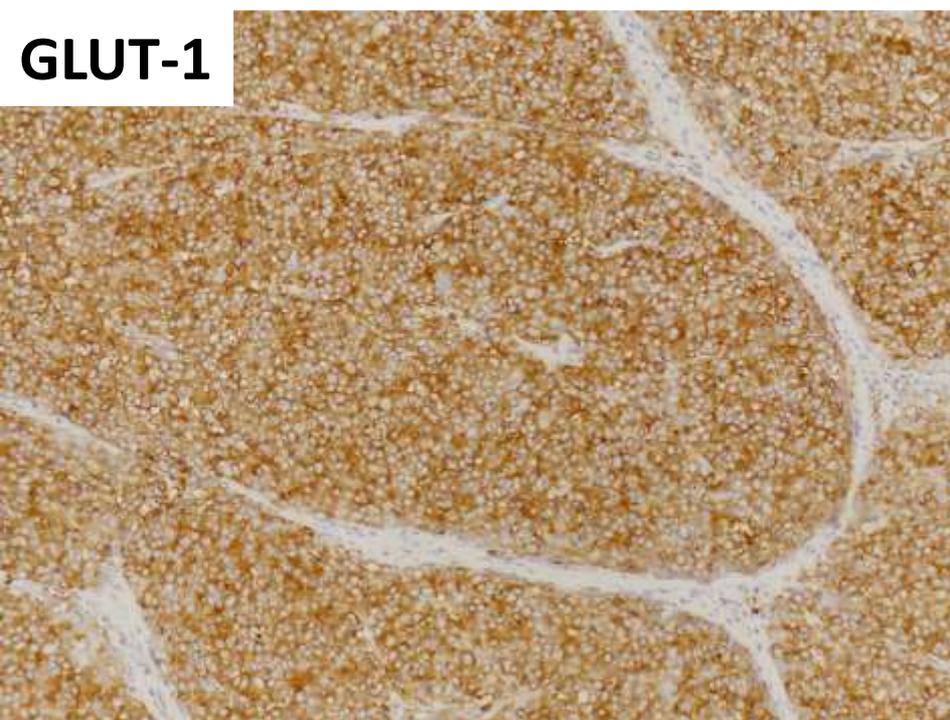
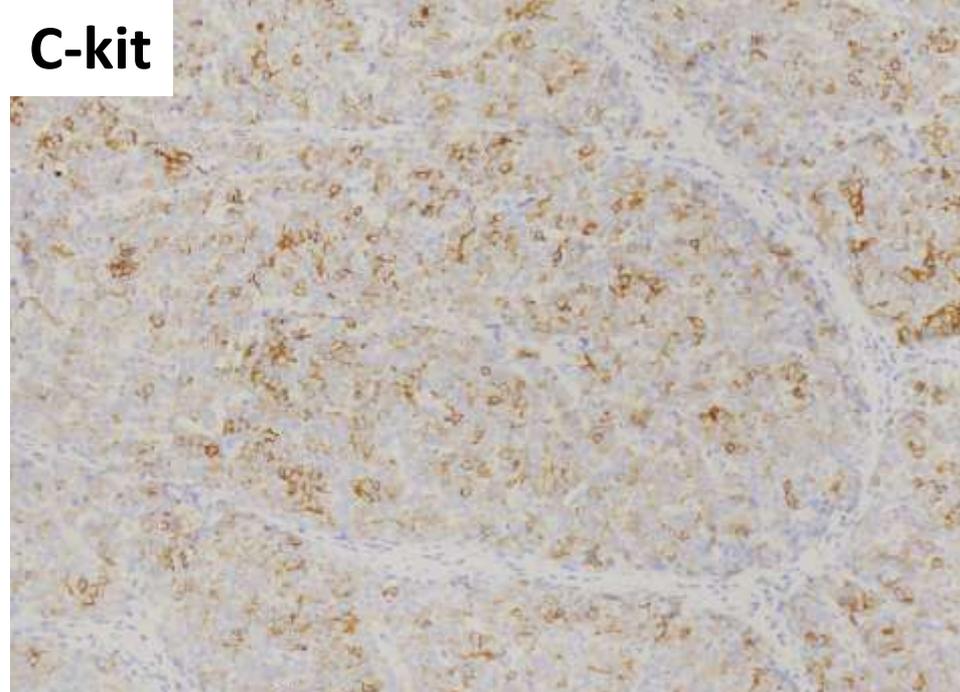
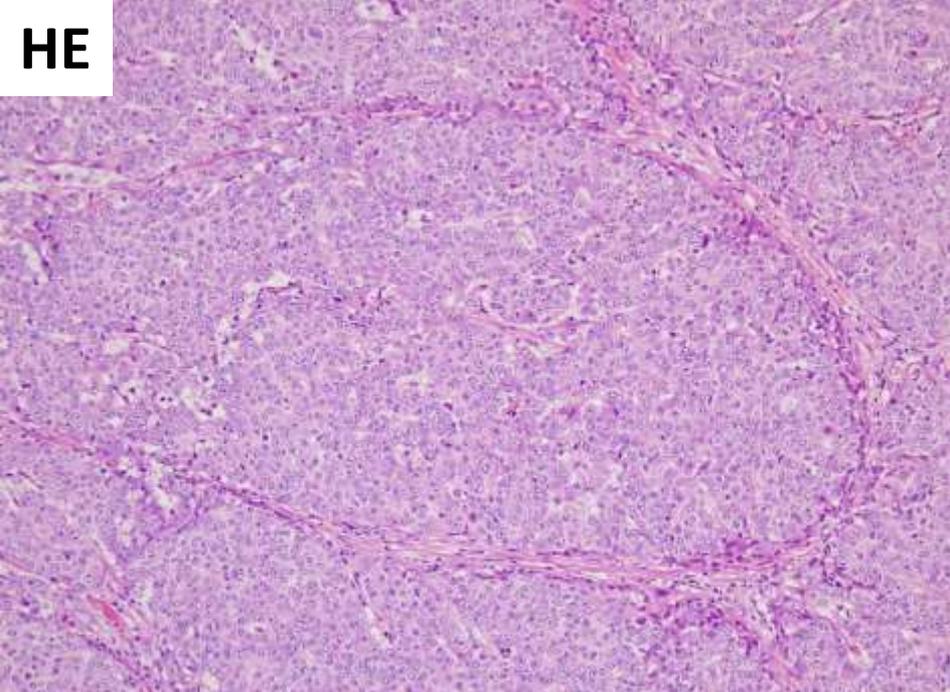
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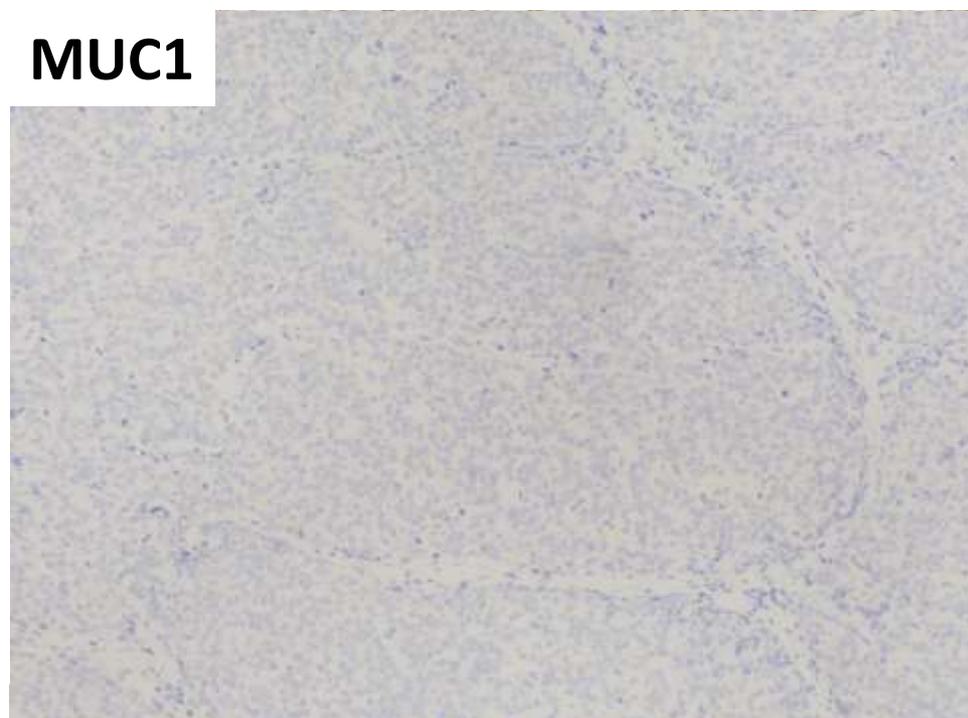
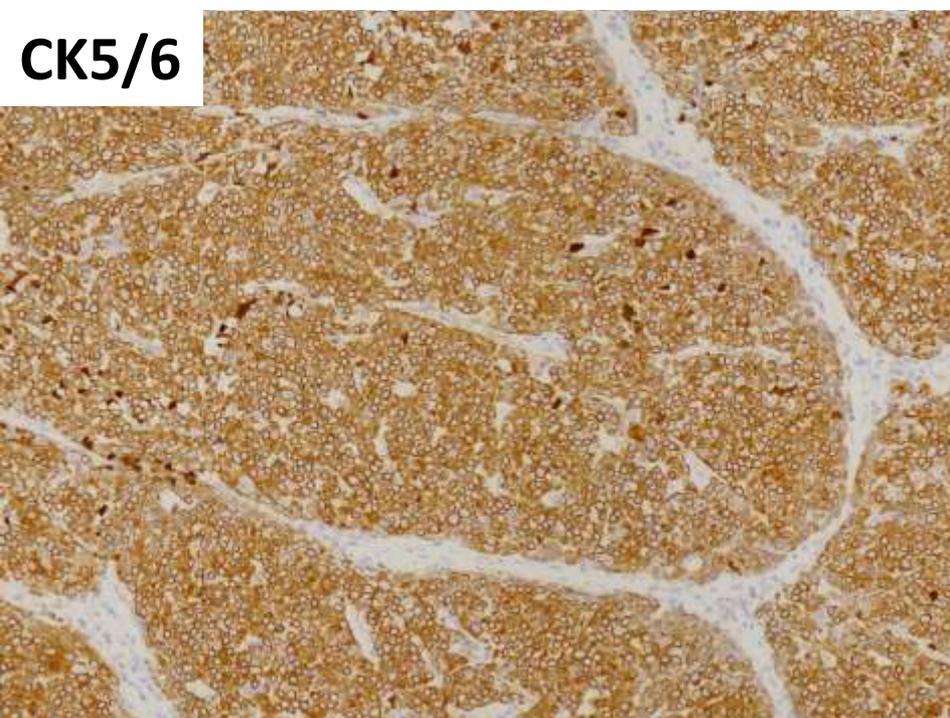
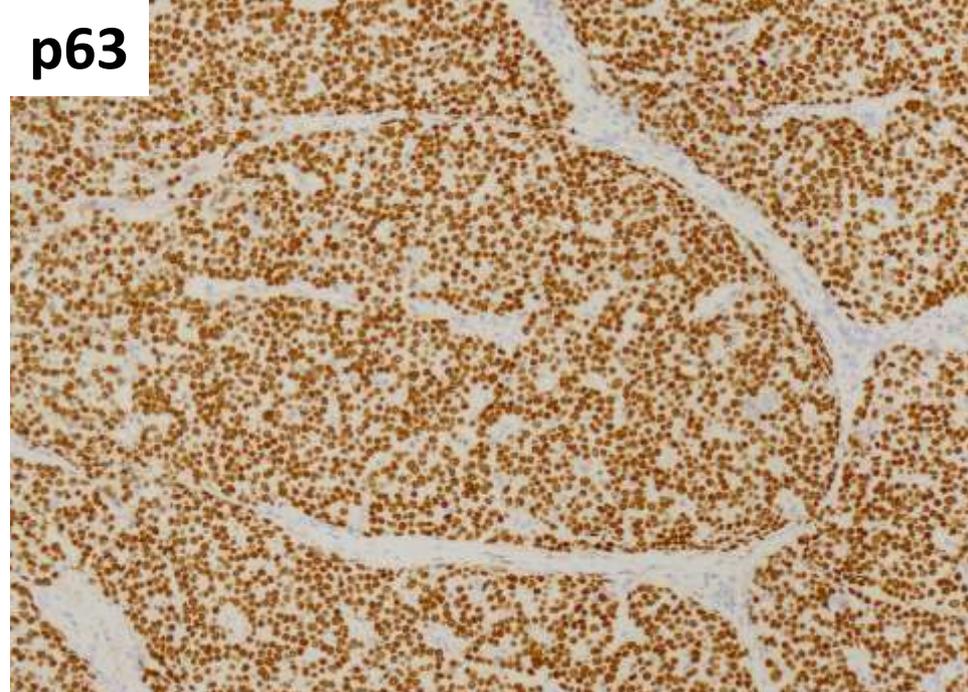
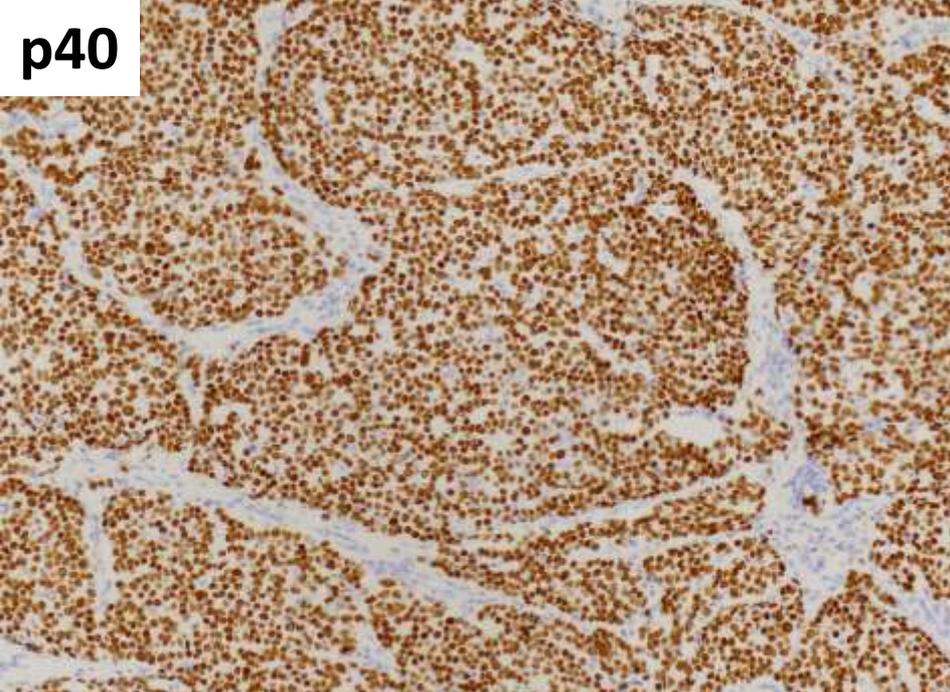


形態学的に

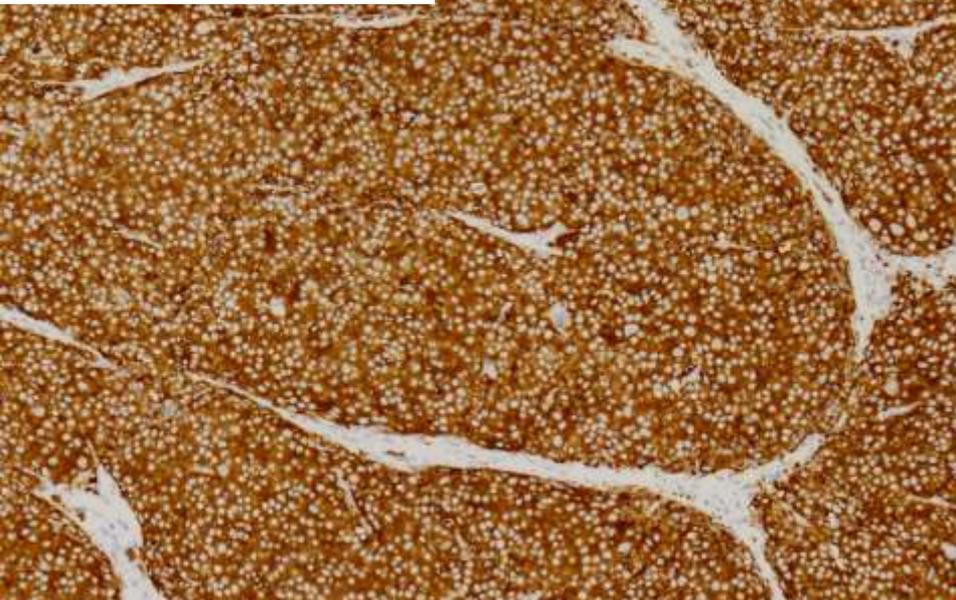
- 扁平上皮癌
- 小細胞癌
- 大細胞神経内分泌癌

と考えられる成分を認めた。

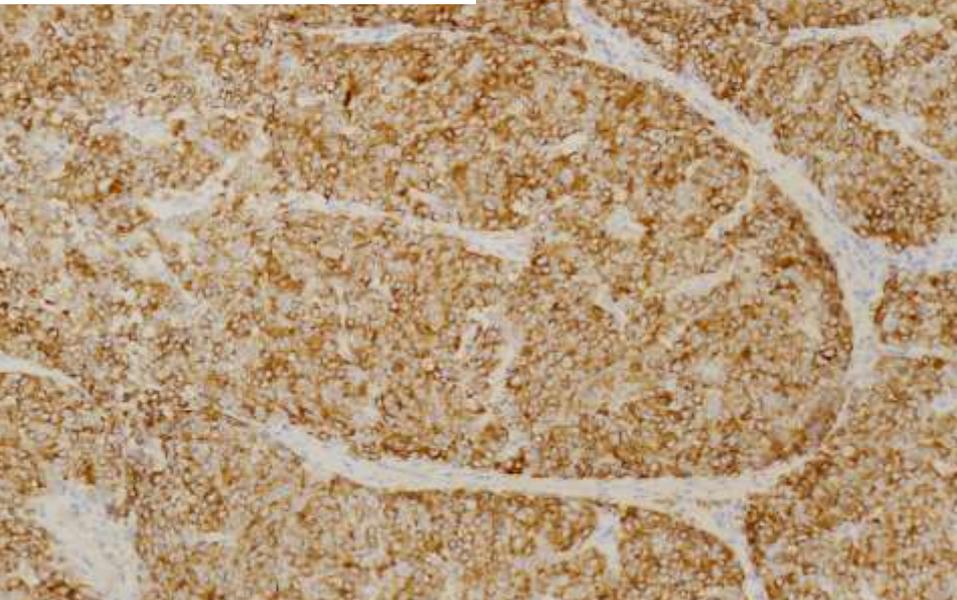




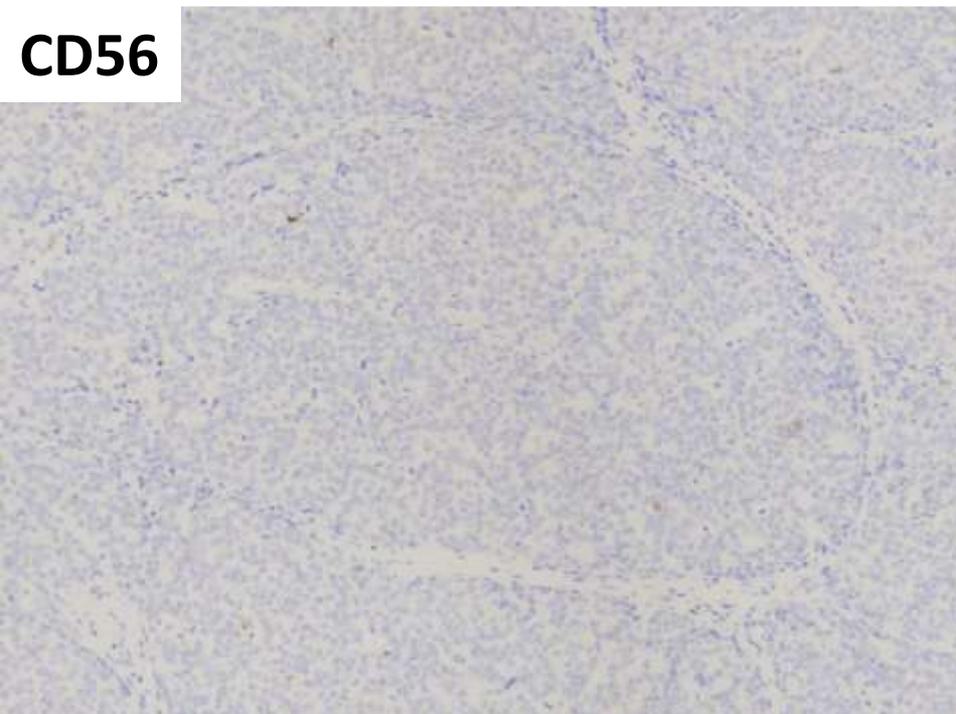
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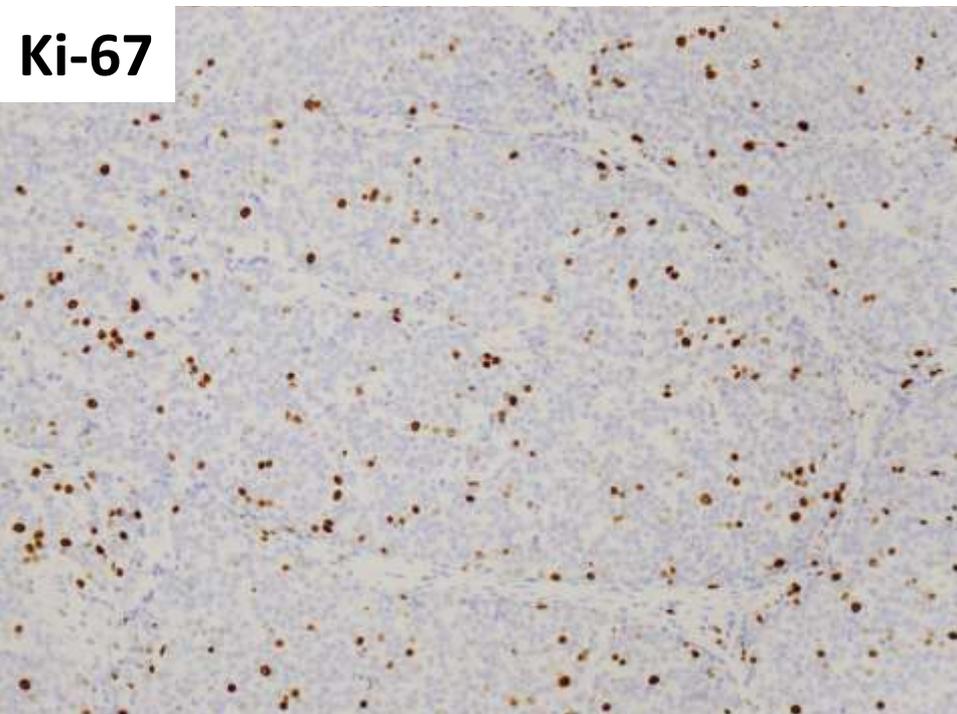
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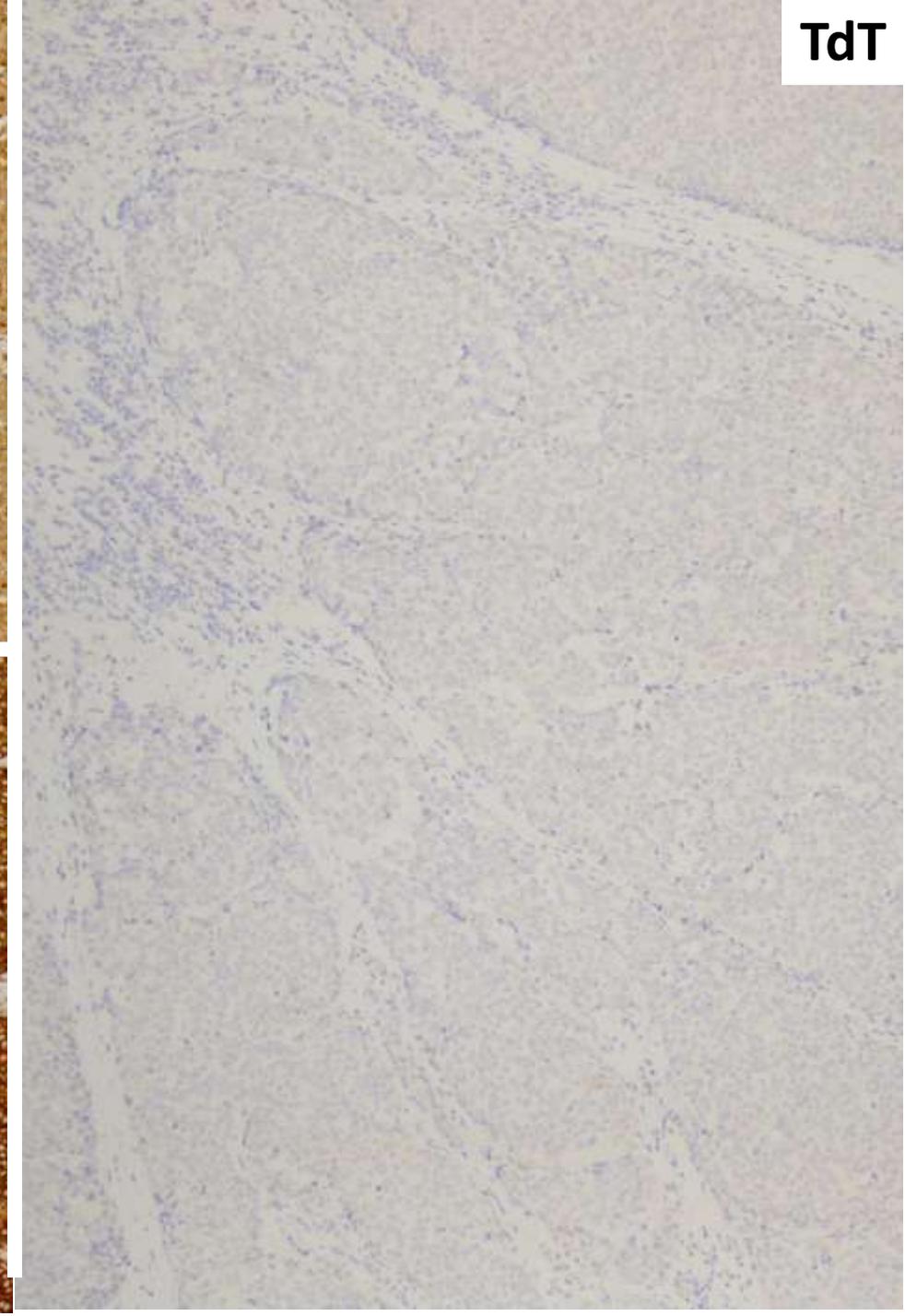
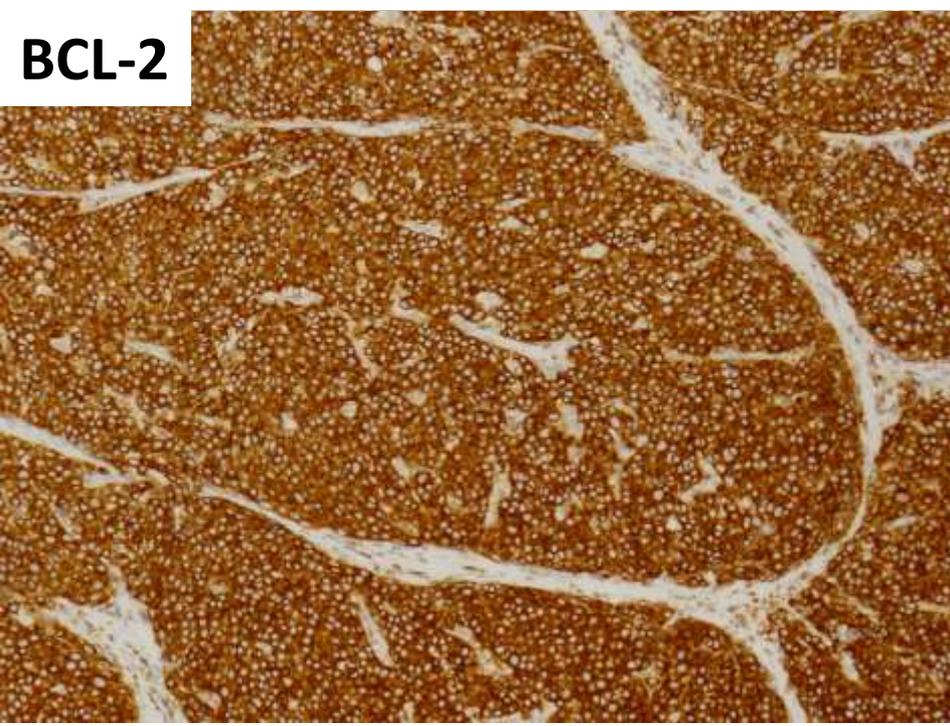
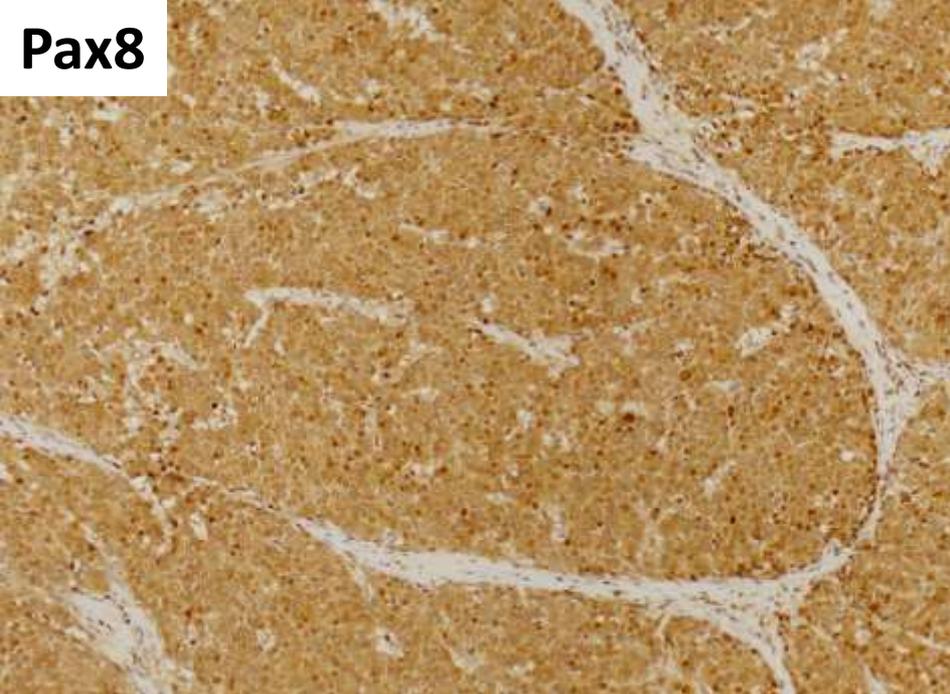


CD56

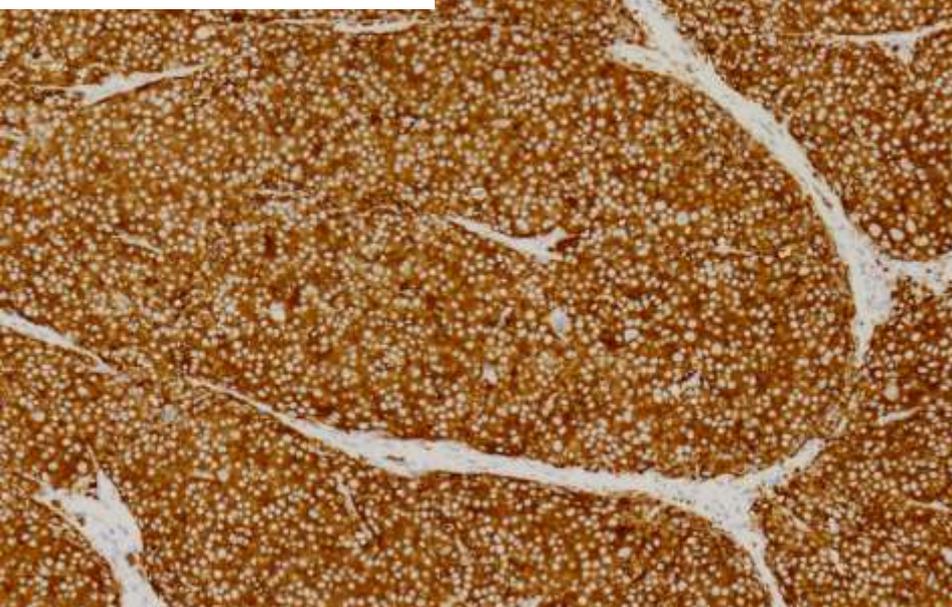


Ki-67

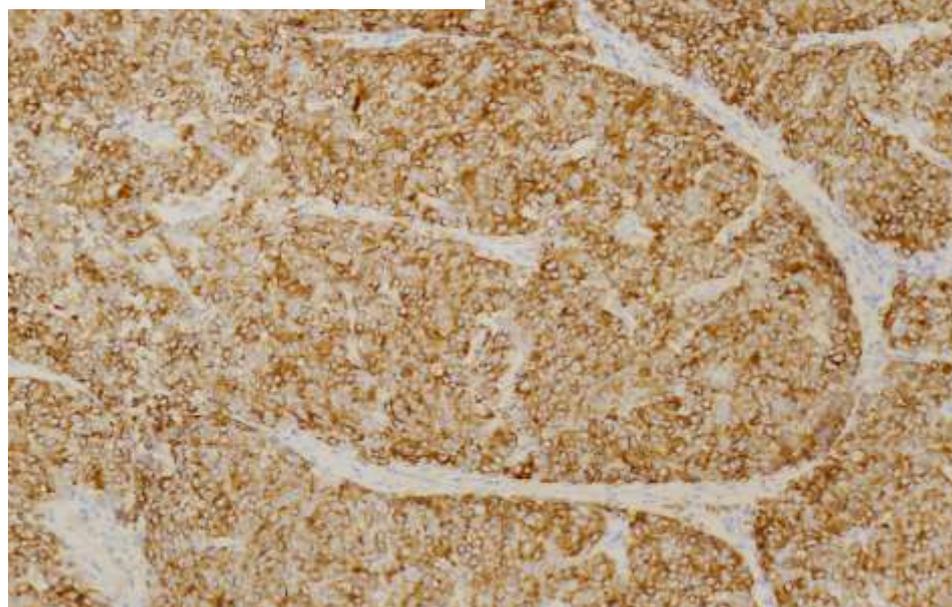




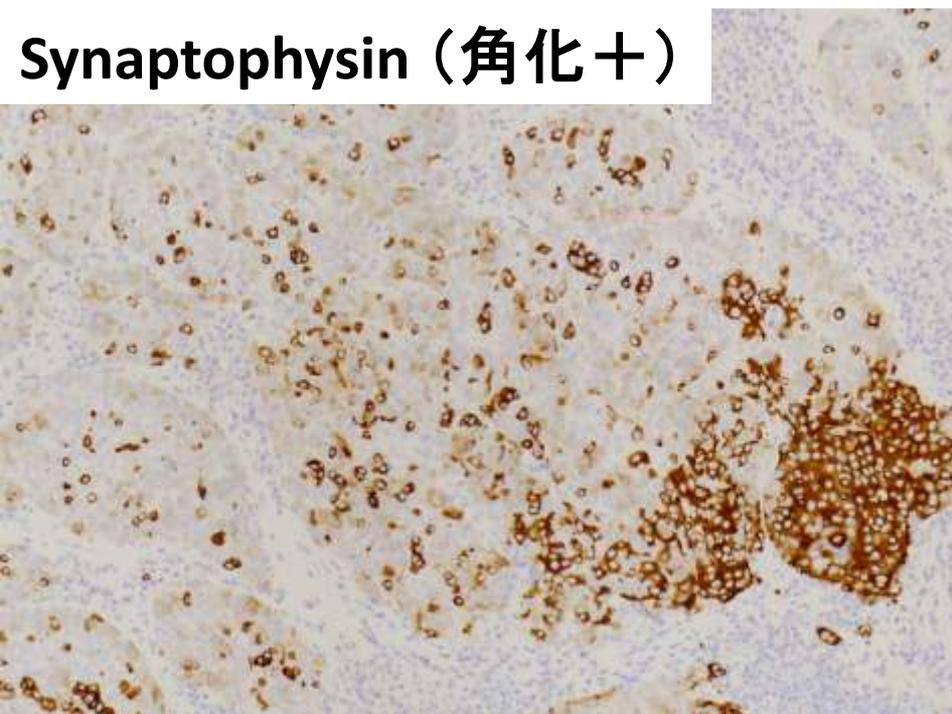
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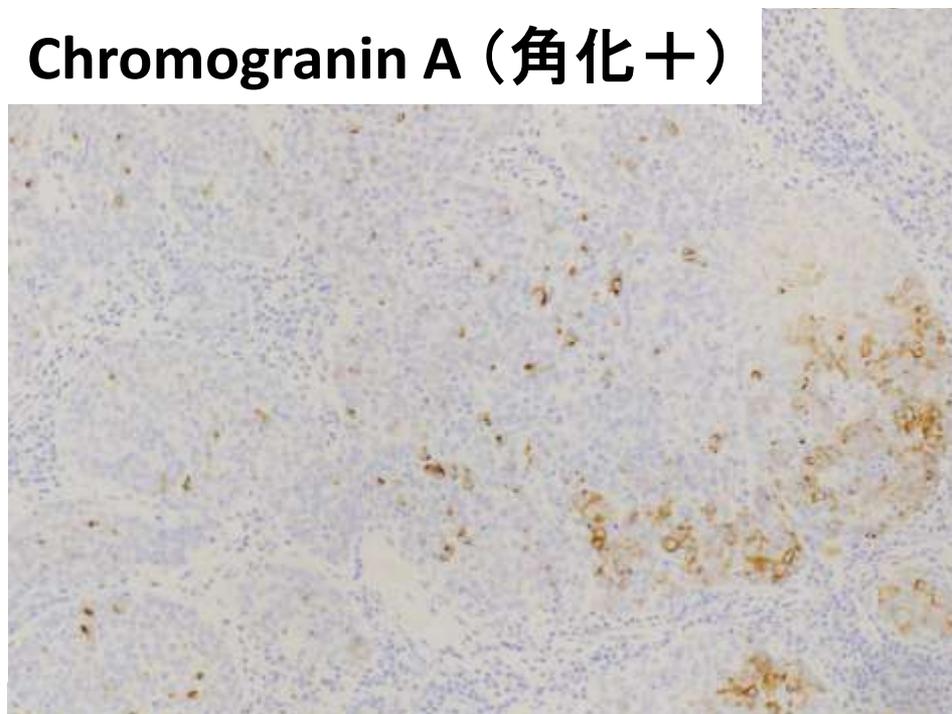
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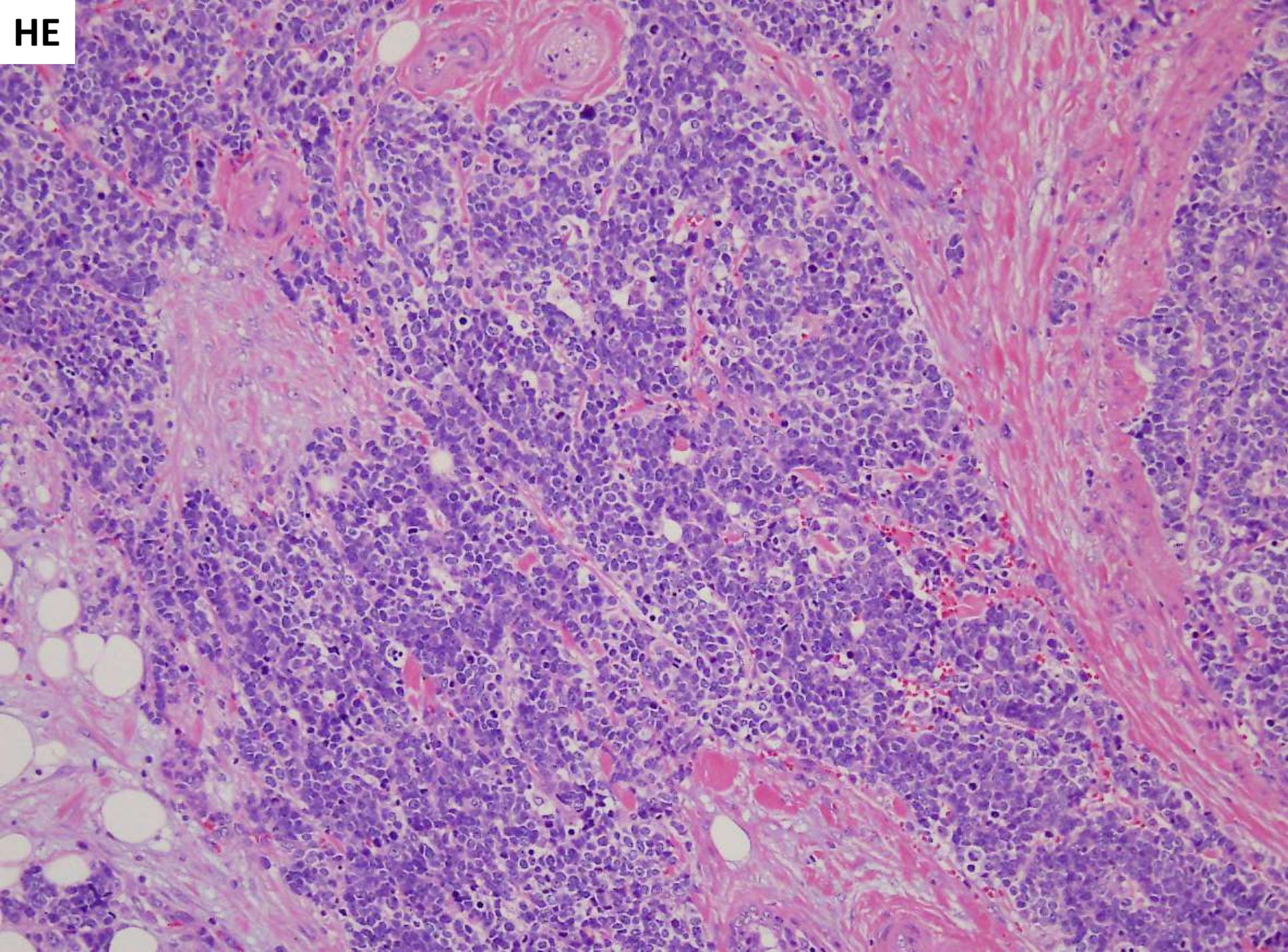


Synaptophysin (角化+)

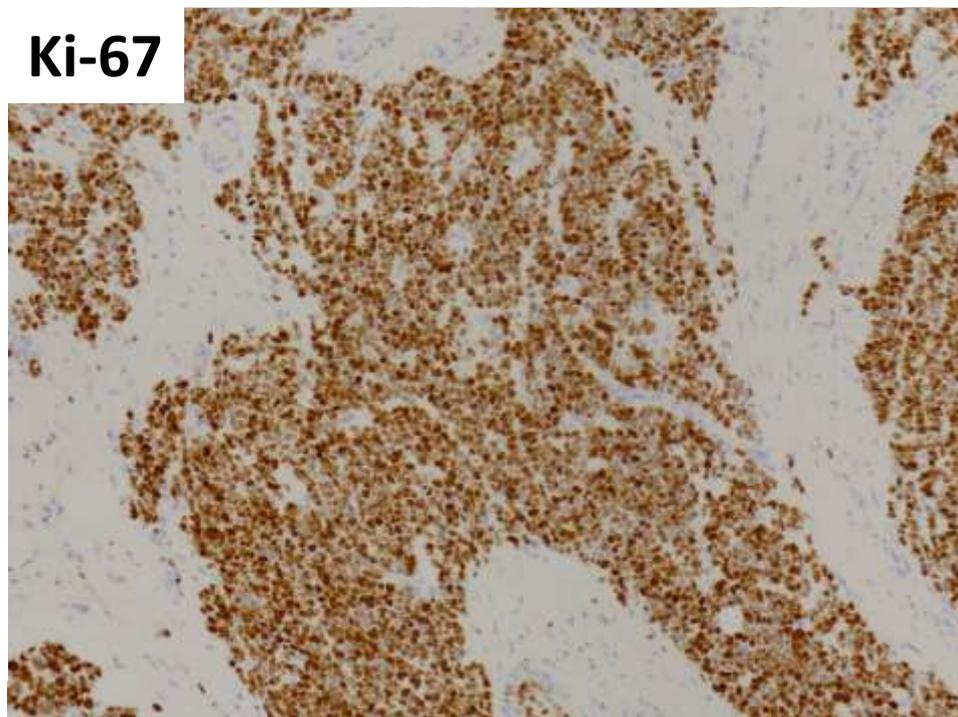
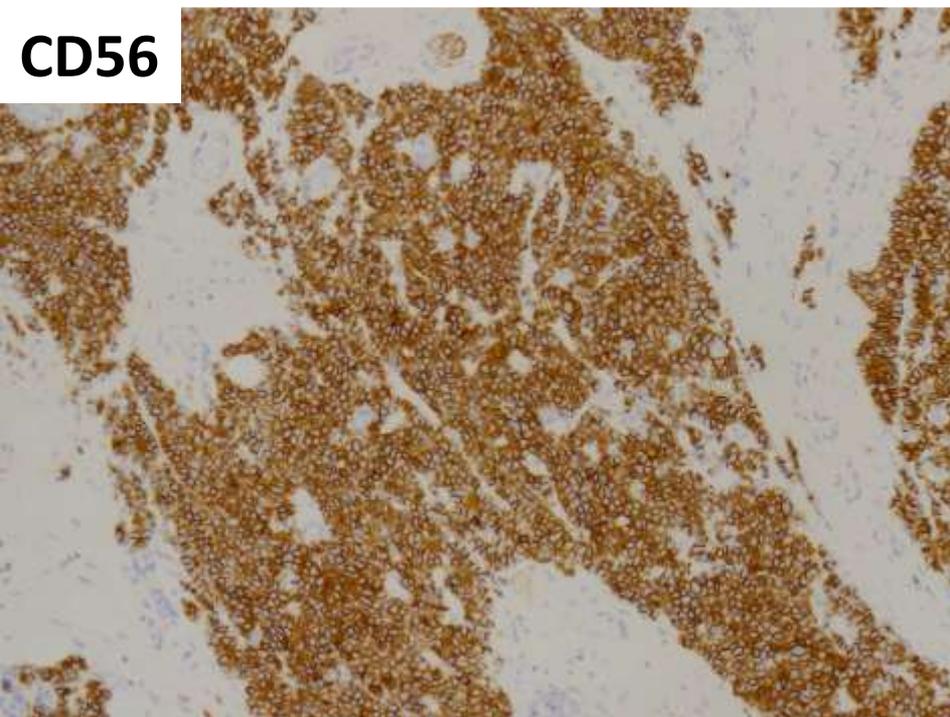
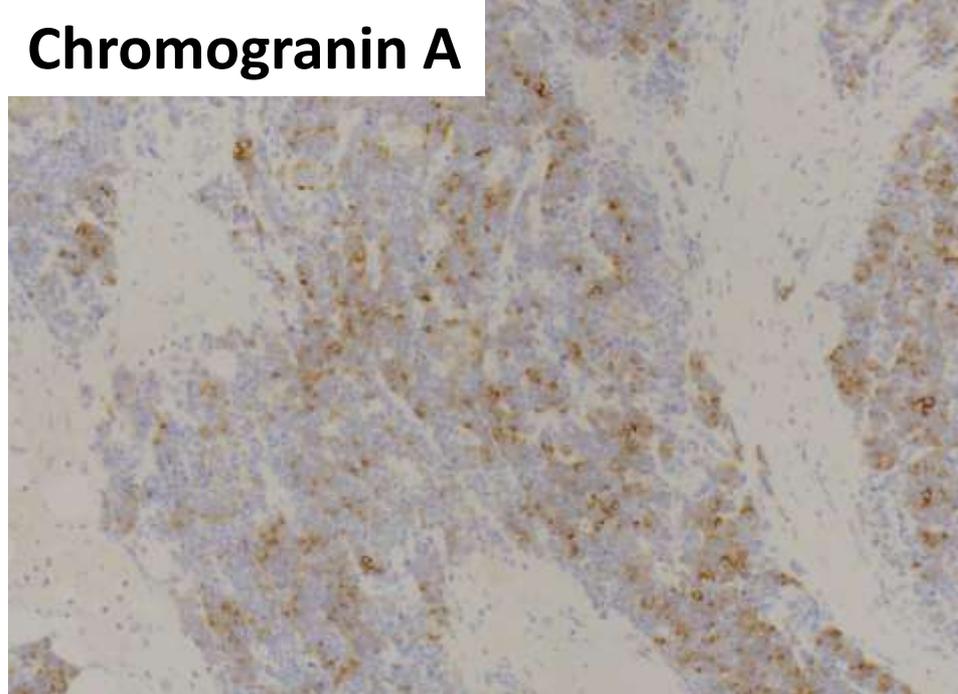
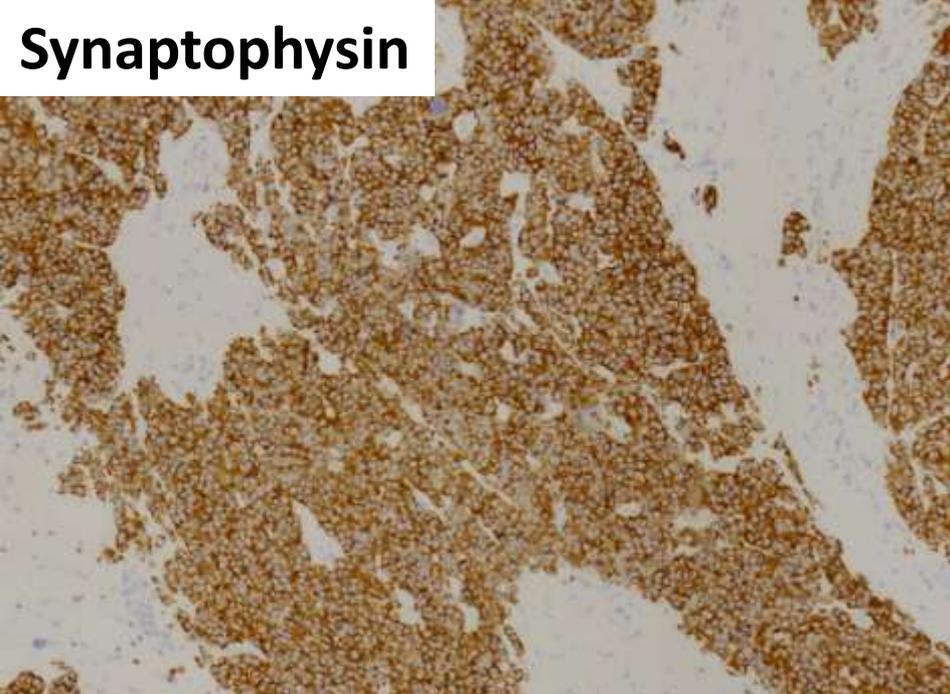


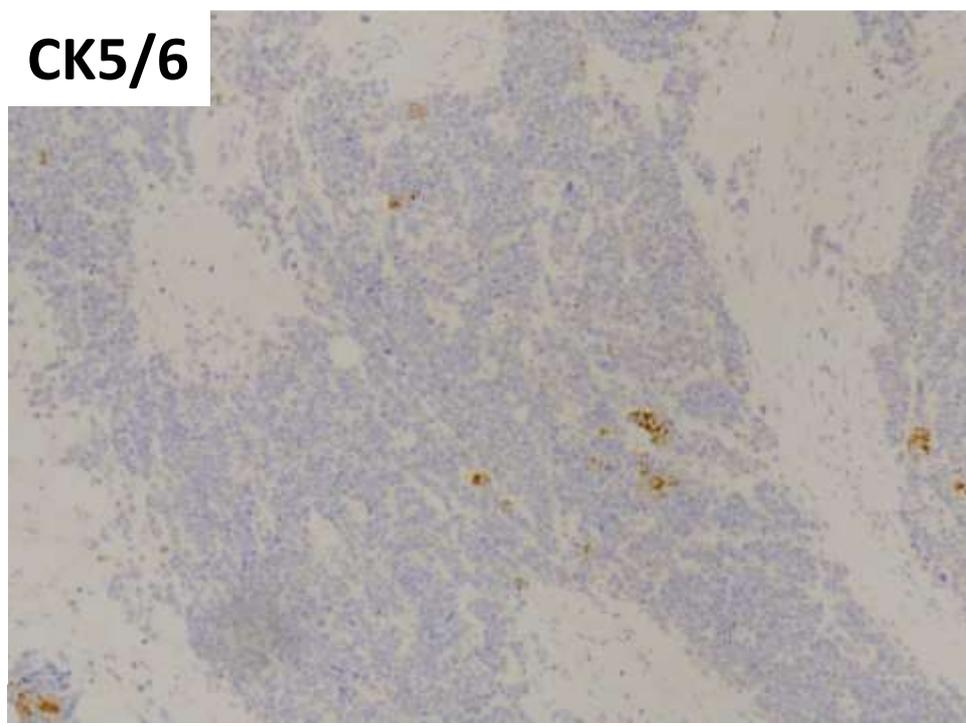
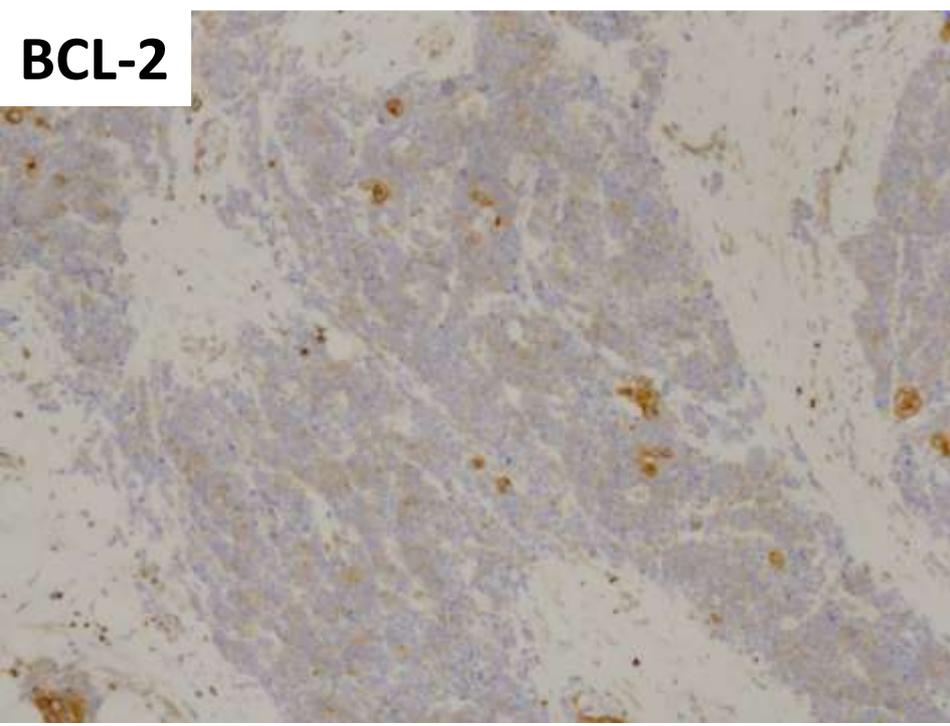
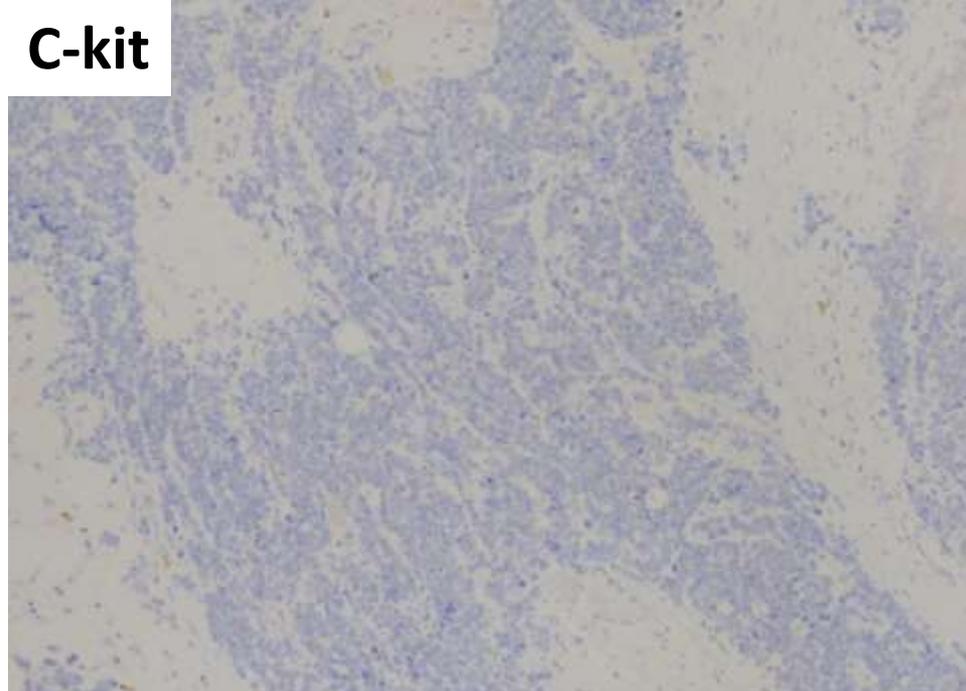
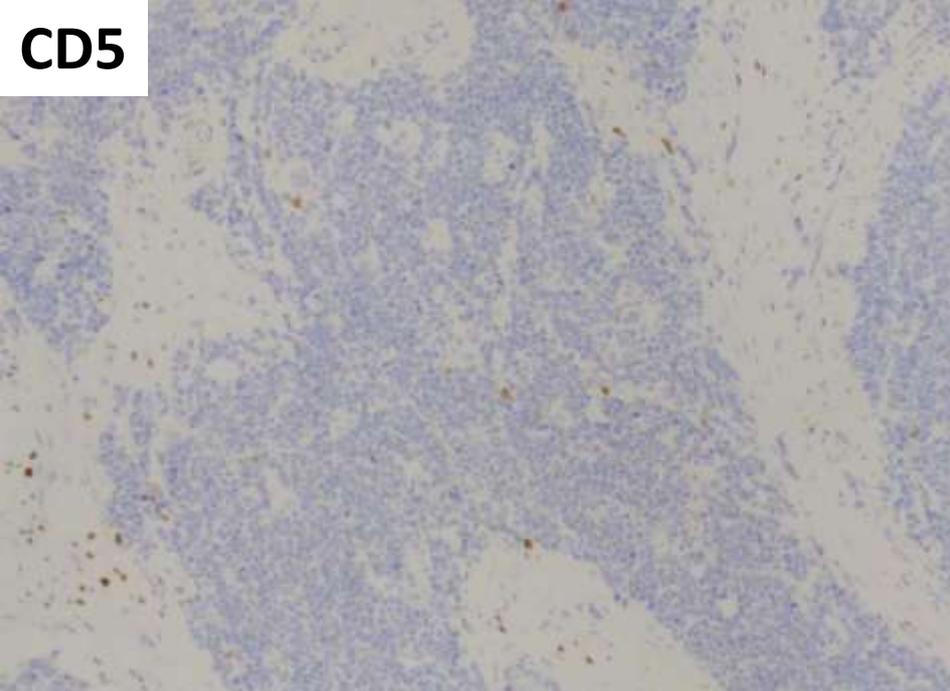
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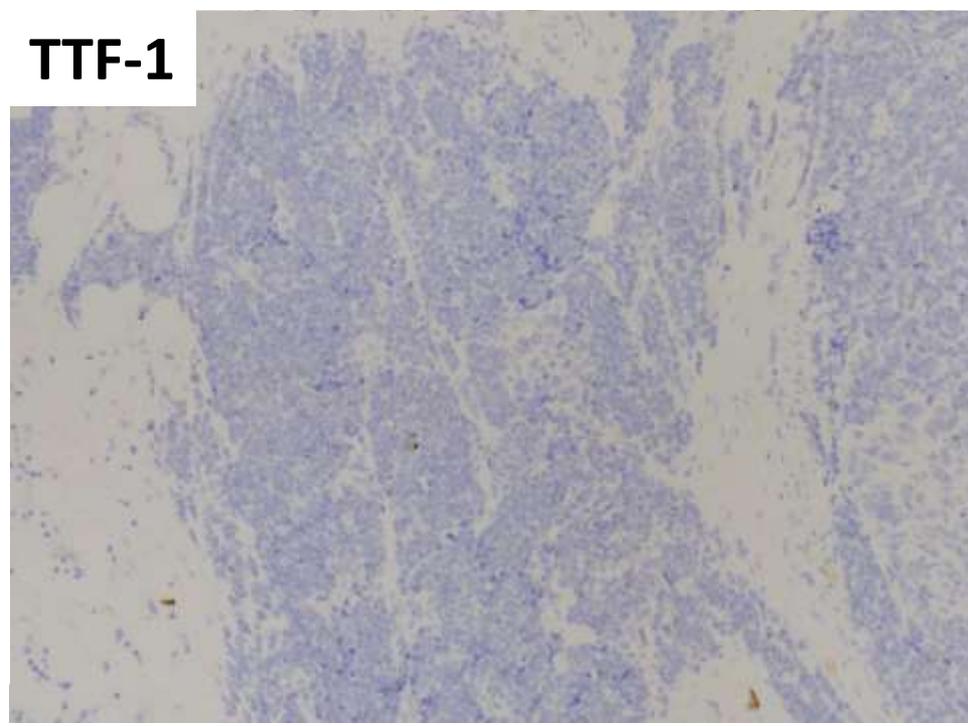
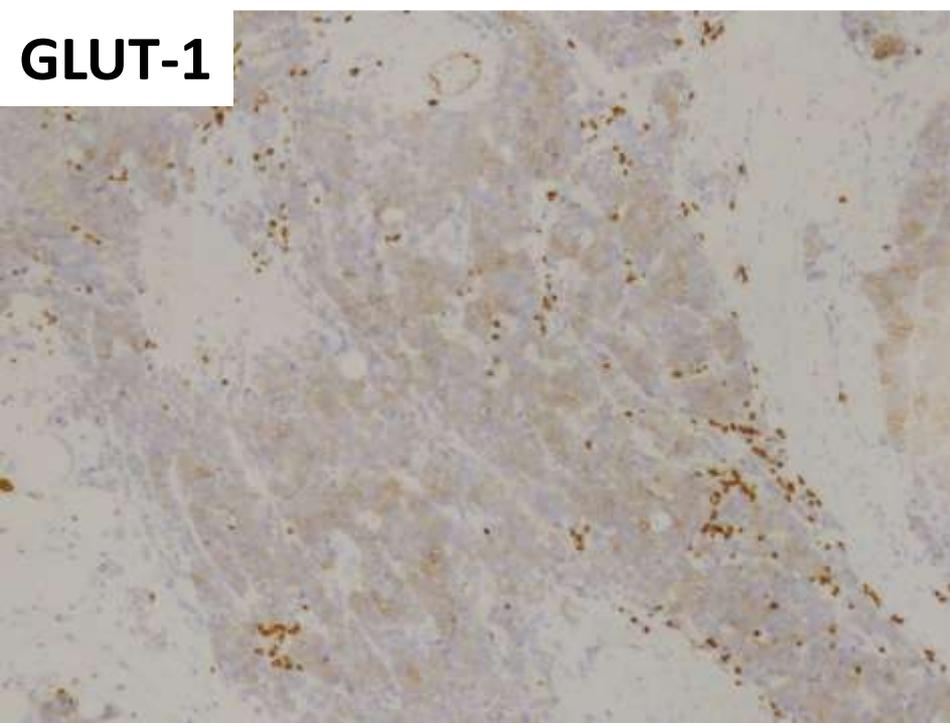
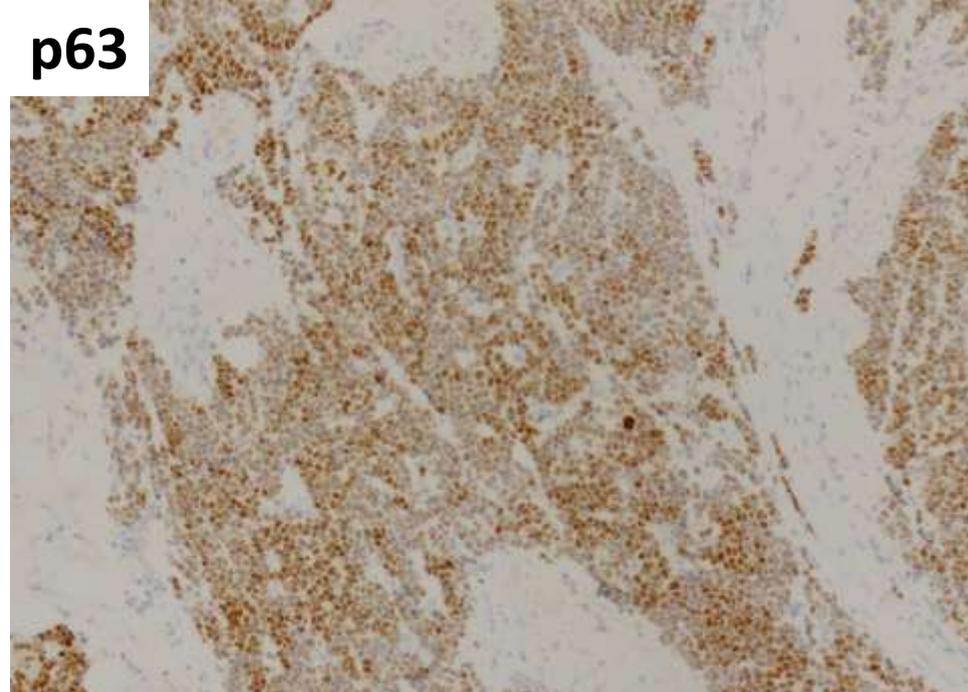
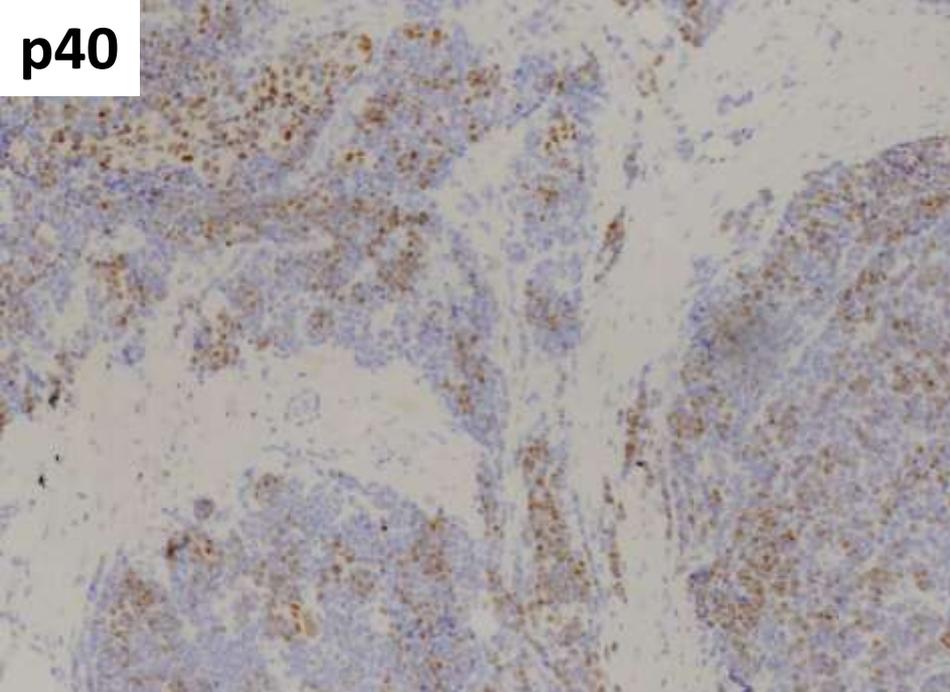


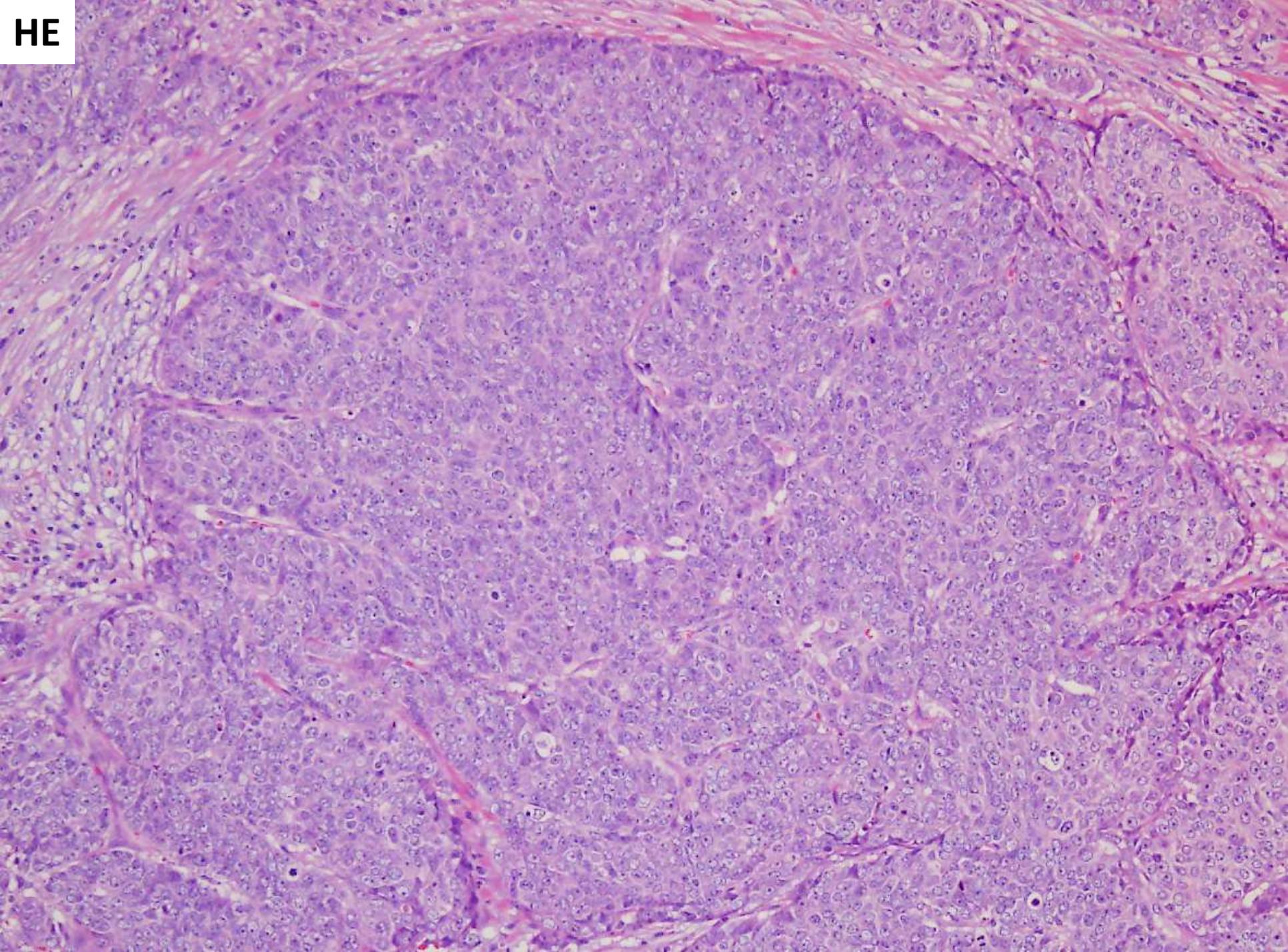


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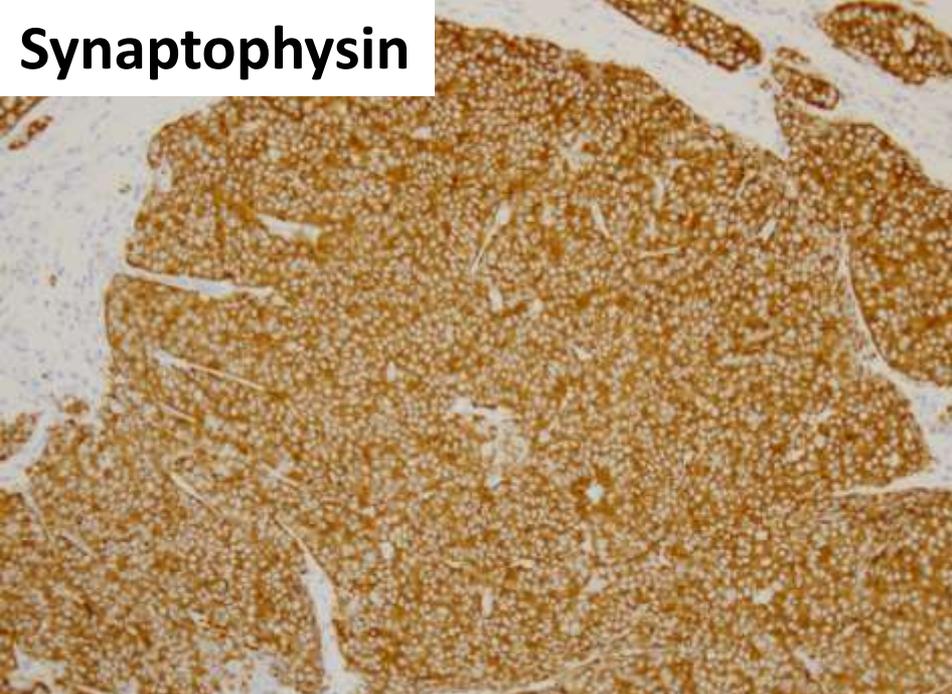




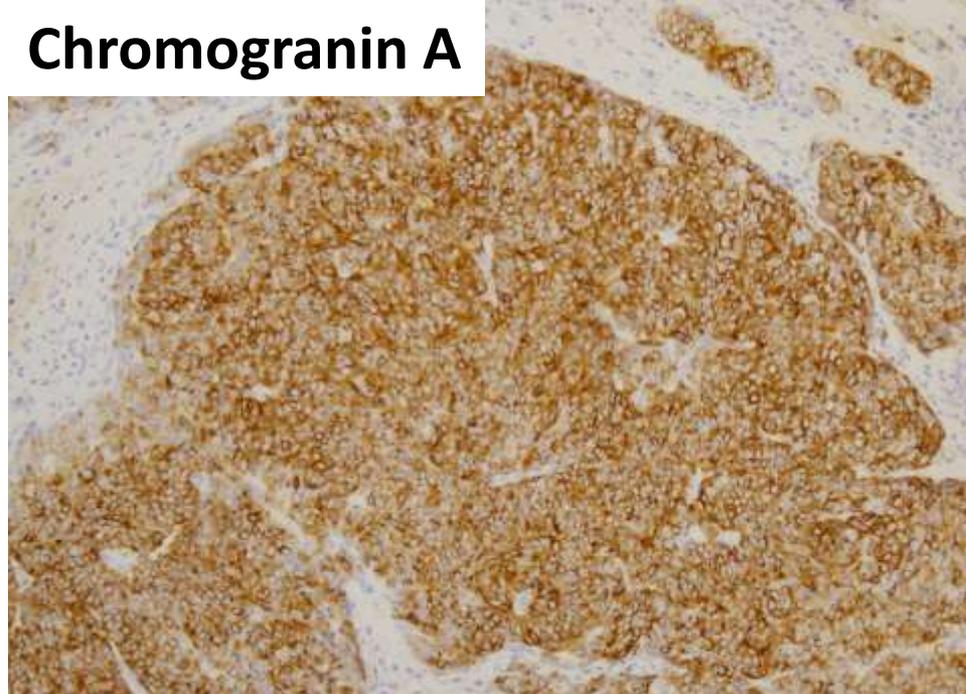


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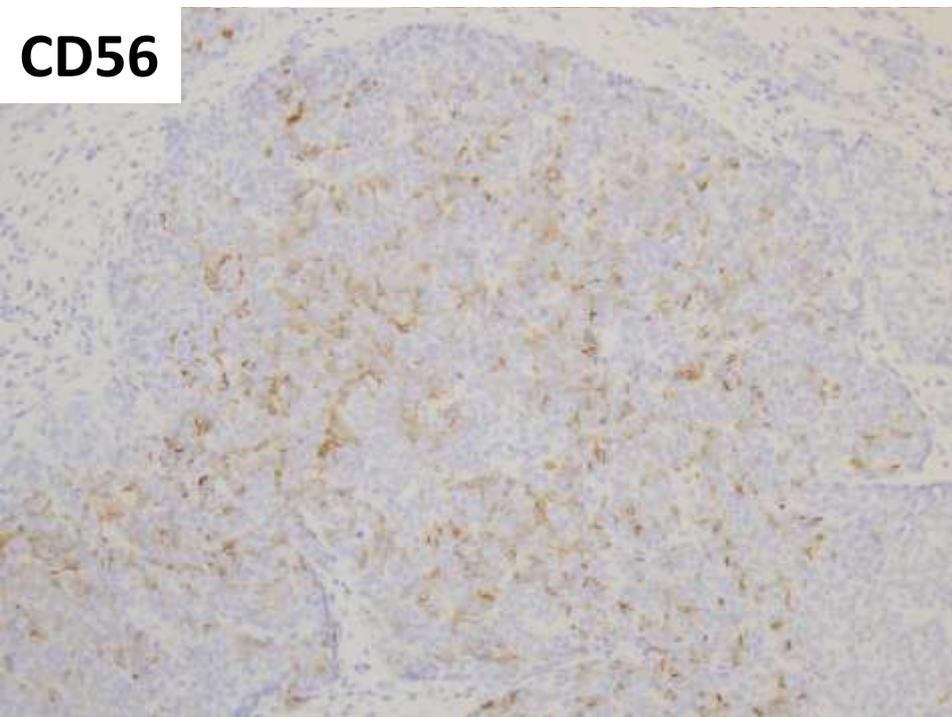
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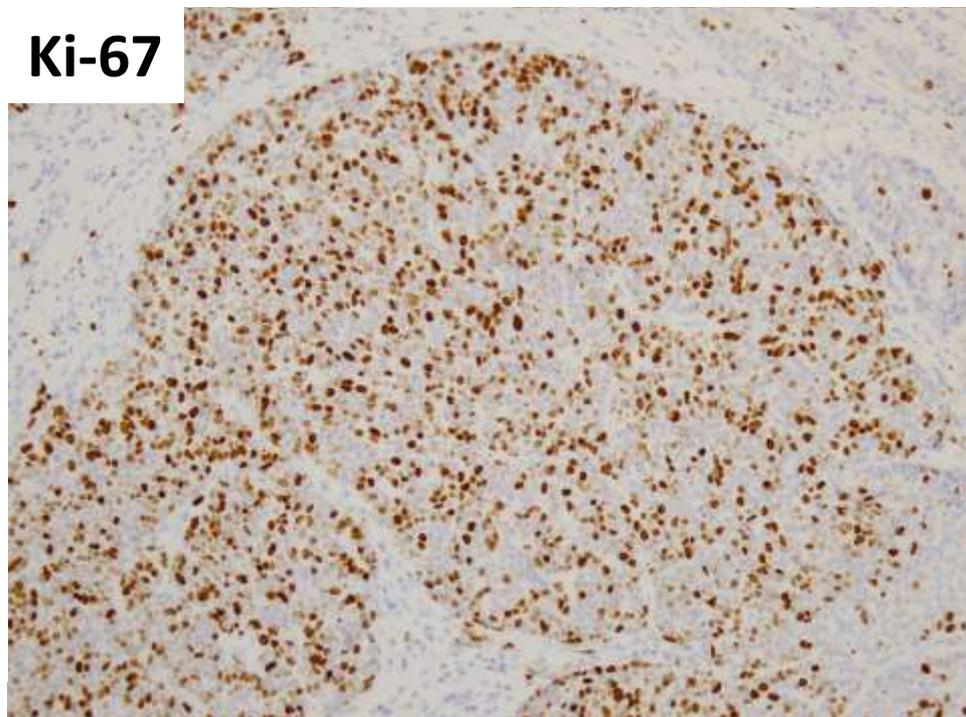
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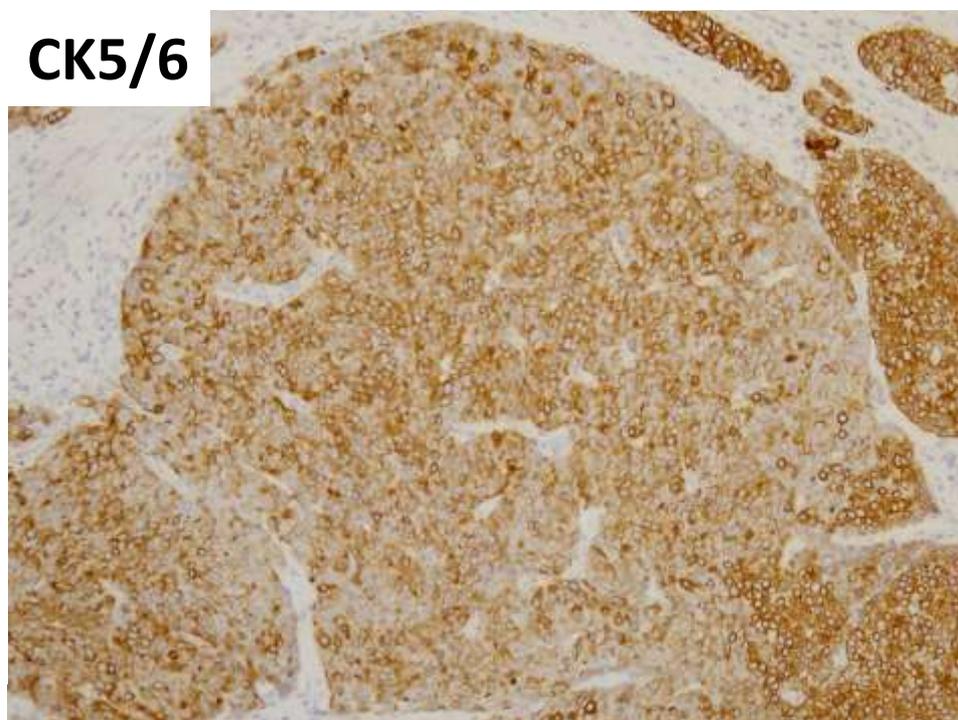
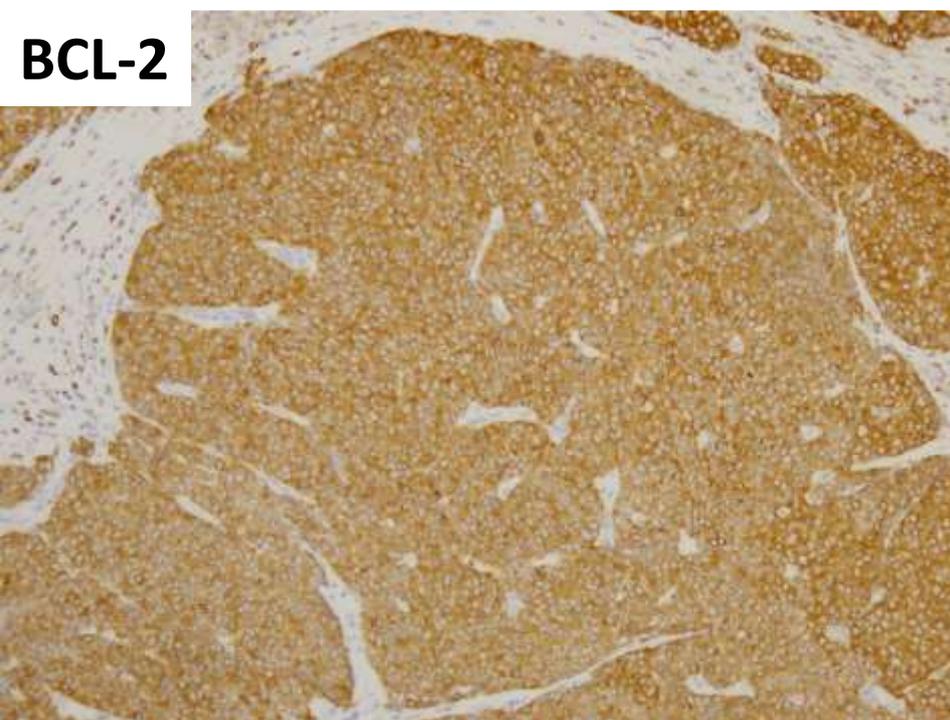
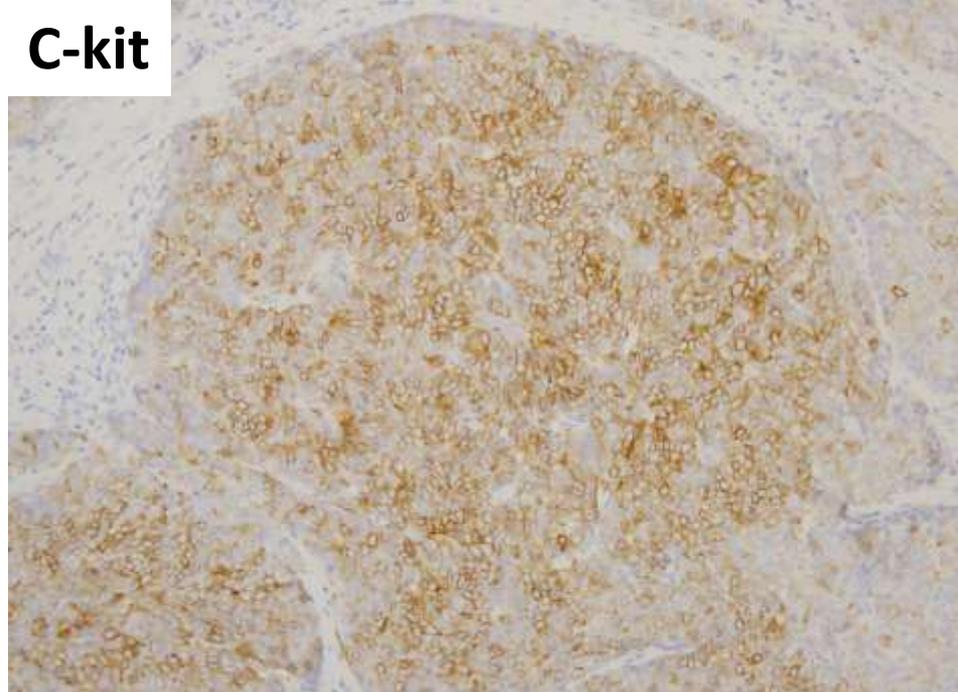
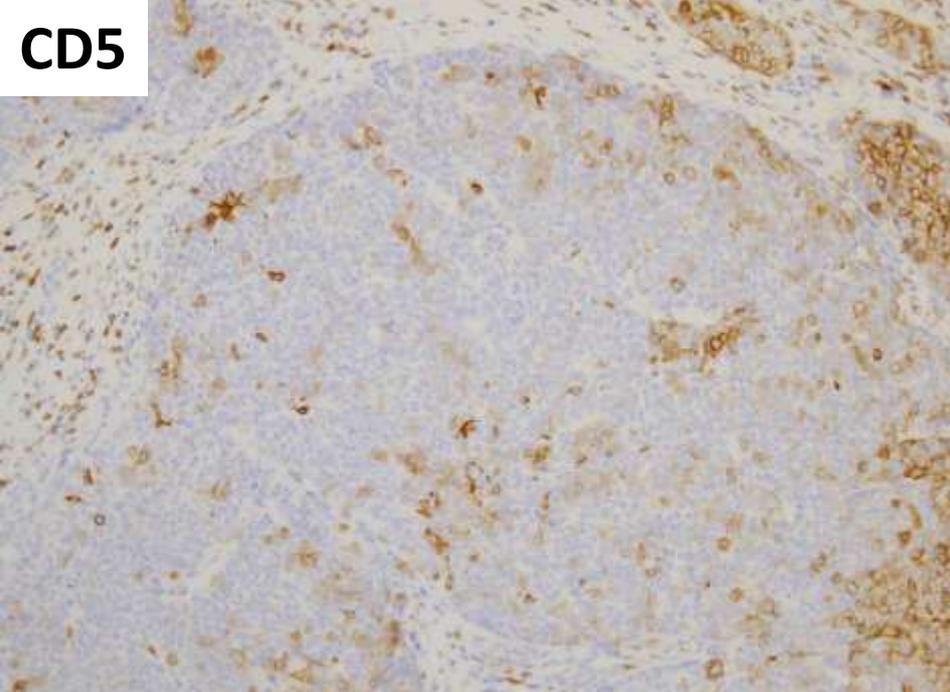


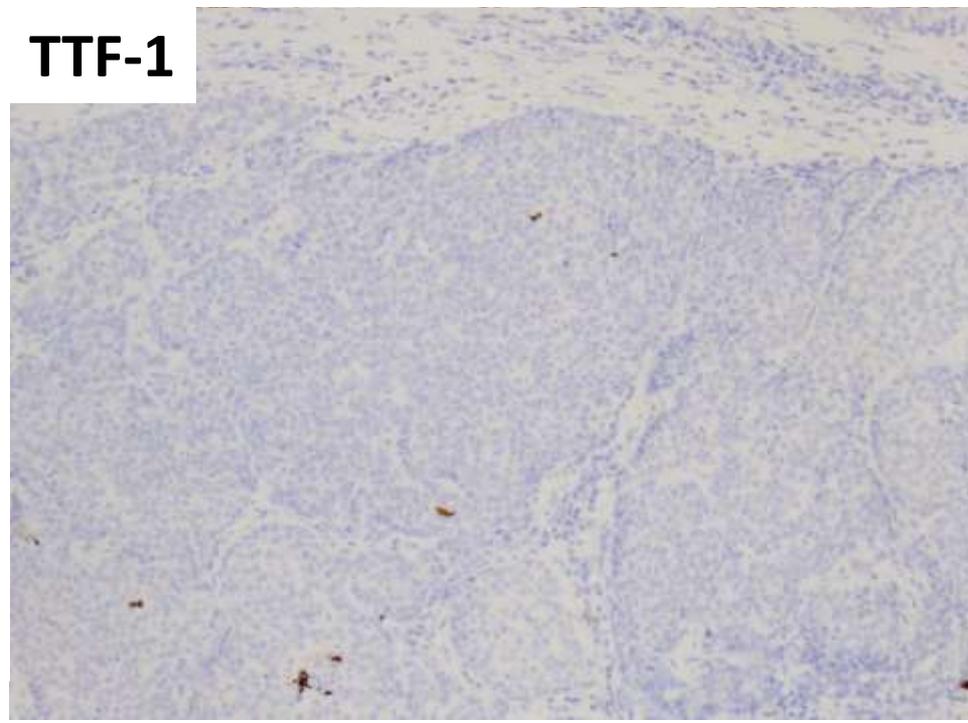
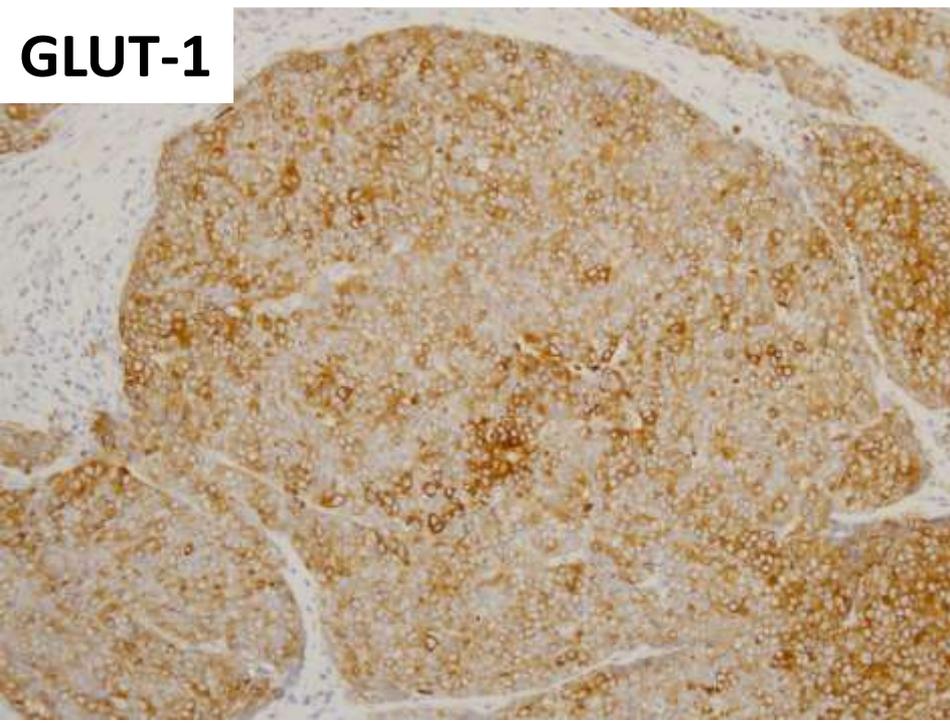
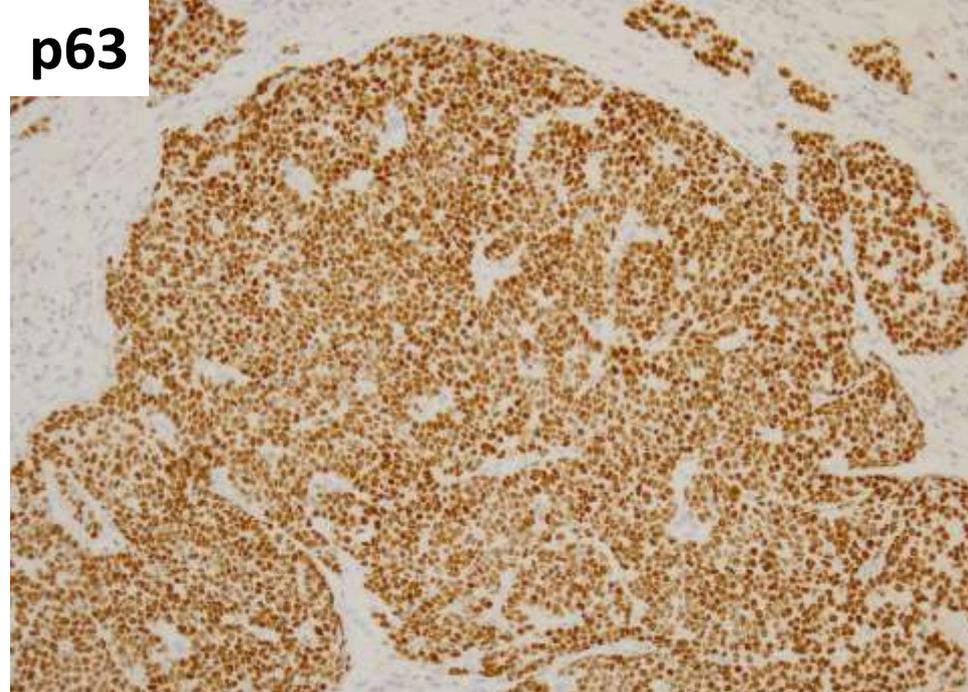
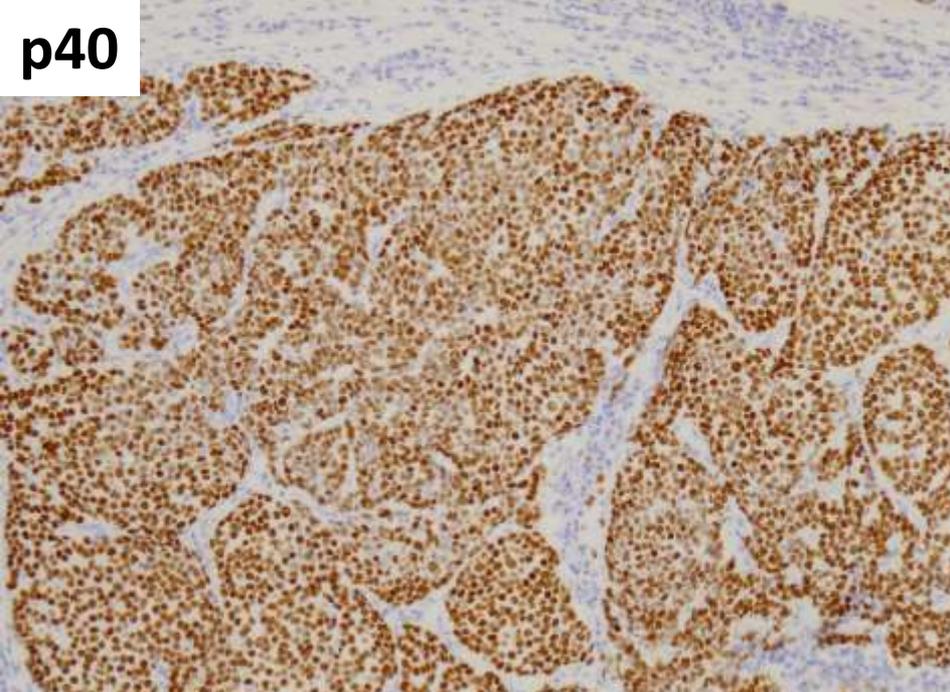
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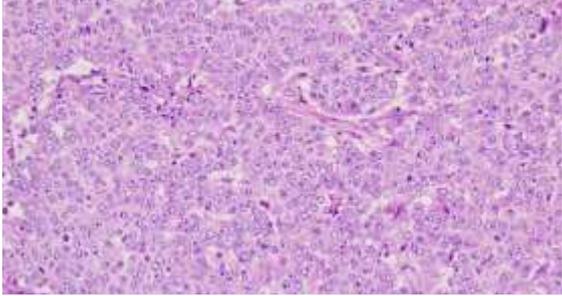
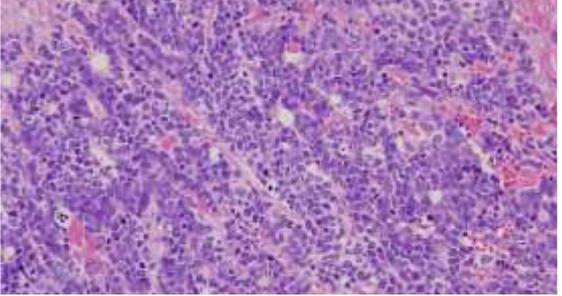
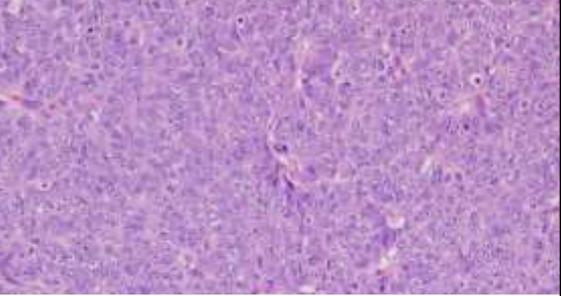
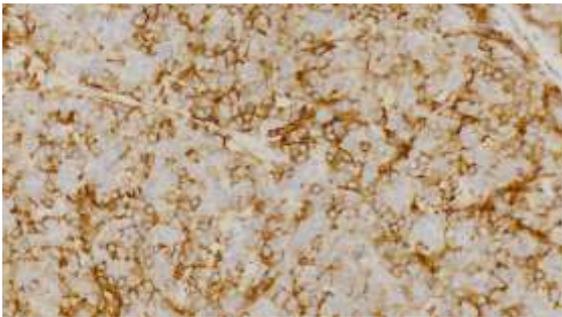
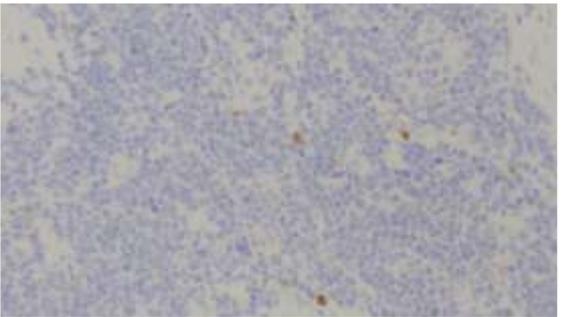
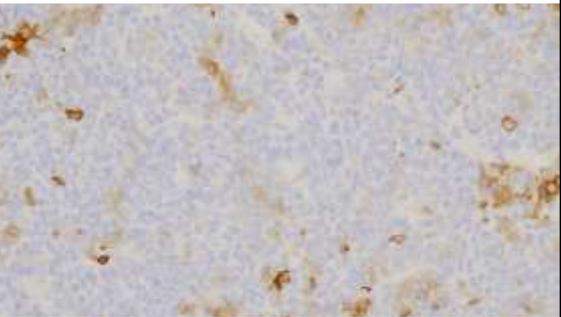
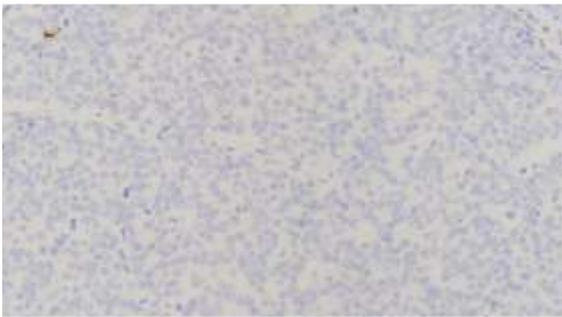
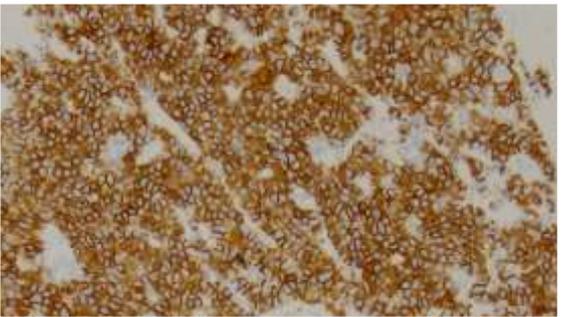
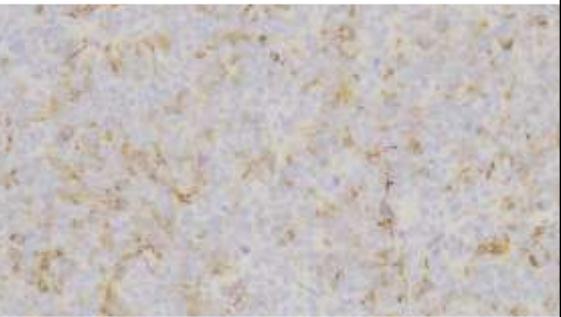
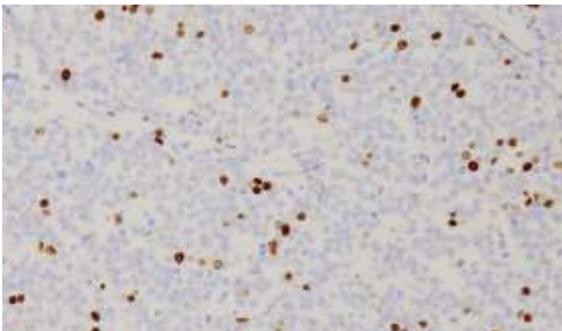
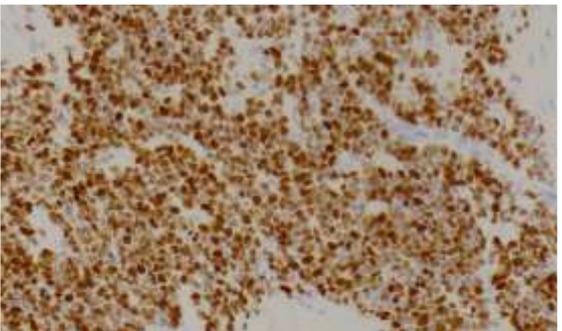
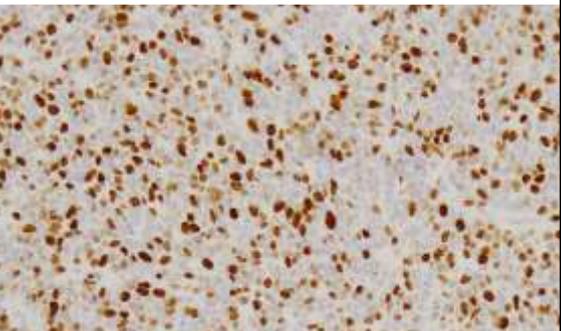
Ki-67

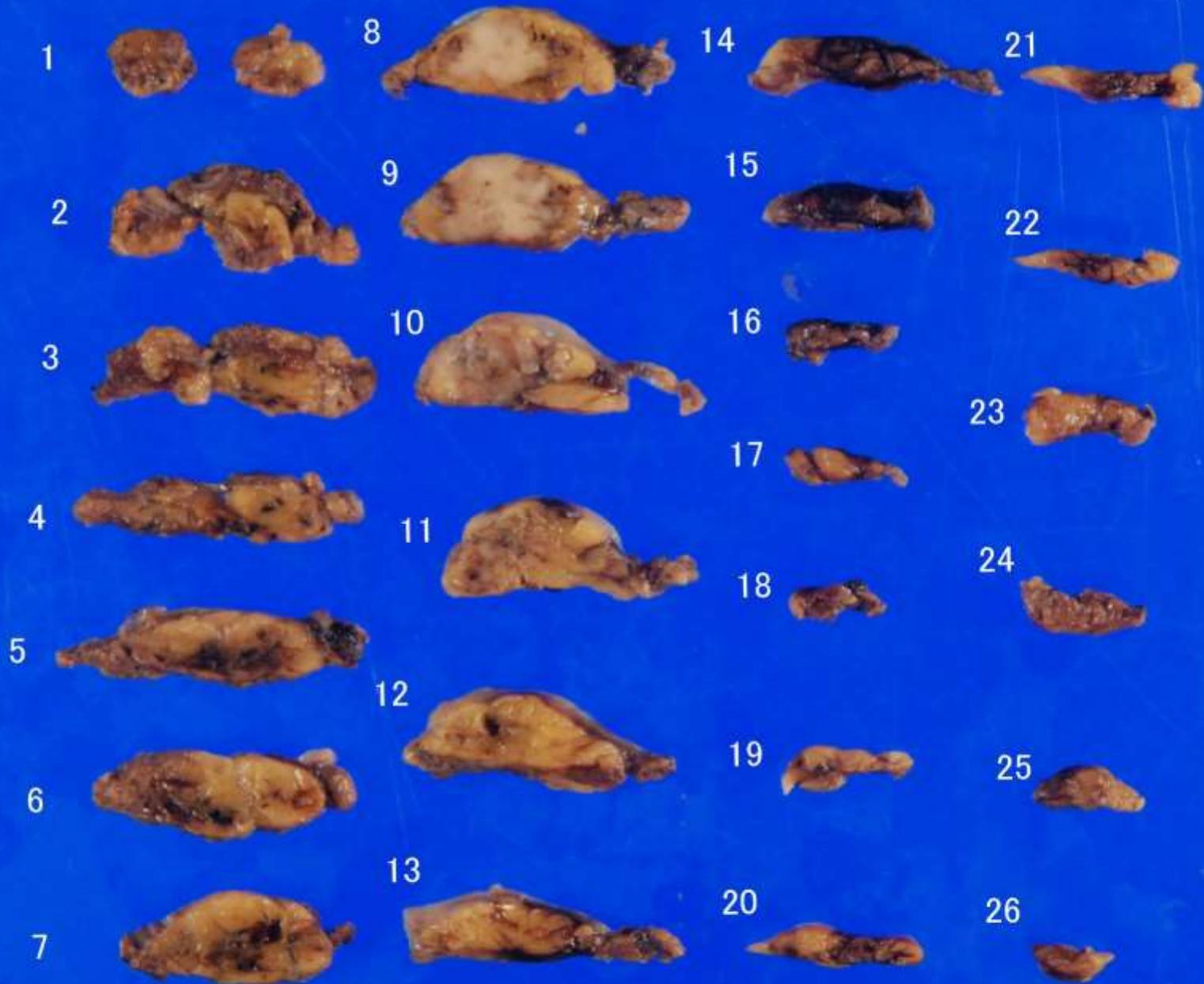


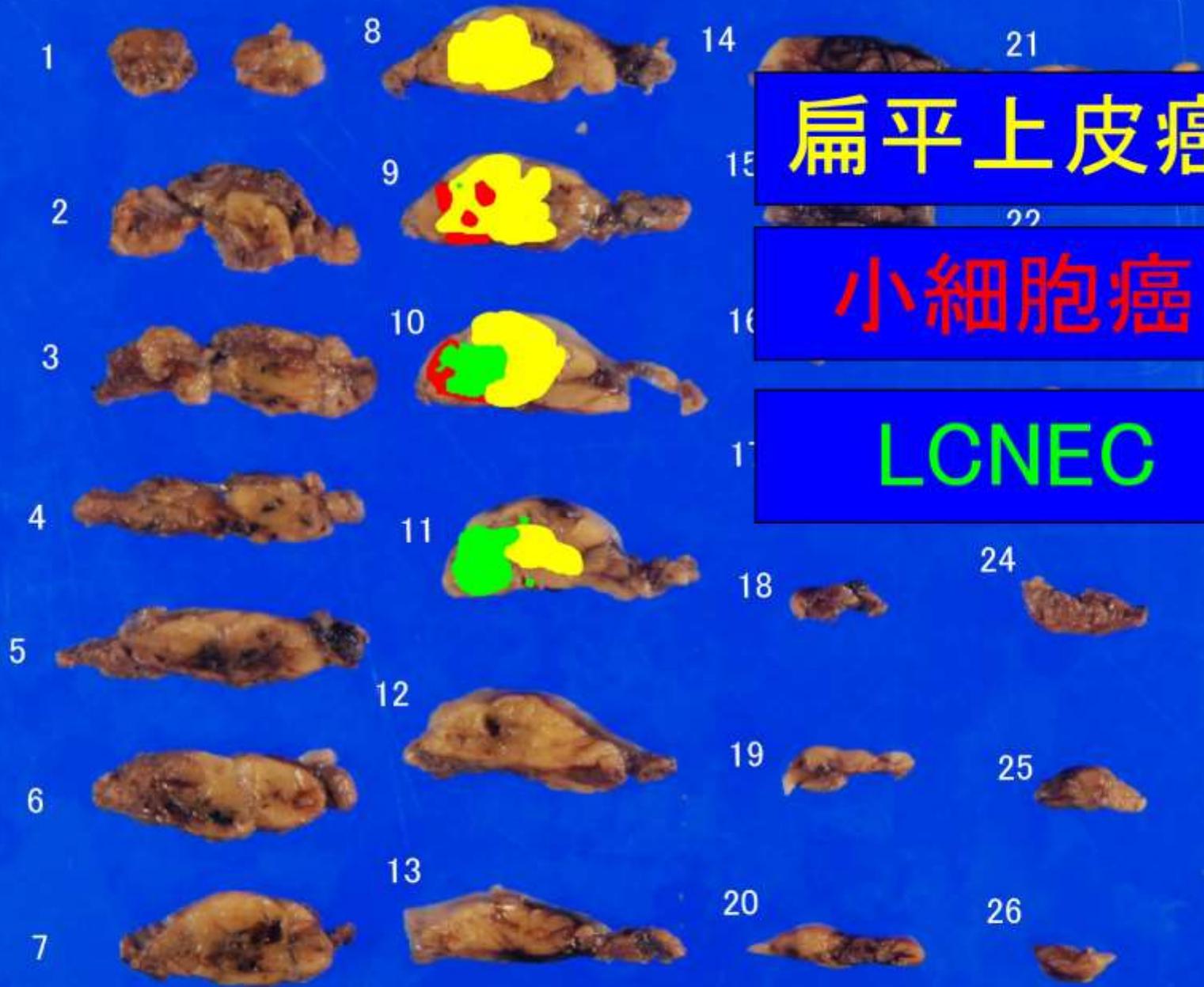




	Squamous cell	Small cell	LCNEC
p40	+	±	+
p63	+	±	+
BCL-2	+	±	+
C-kit	+	-	+
CK5/6	+	-	+
GLUT-1	+	±	±
CD5	+	-	-
Synaptophysin	± ~ +	+	+
Chromogranin A	- ~ +	±	+
CD56	-	+	±
Ki-67	20%	~ 100%	60%

	Squamous cell	Small cell	LCNEC
HE			
CD5			
CD56			
Ki-67			





扁平上皮癌

小細胞癌

LCNEC



【最終診断】

混合型小細胞癌

(扁平上皮癌 70%、小細胞癌 10%、LCNEC 20%)

【胸腺の原発性内分泌腫瘍】

胸腺腫瘍の2～5%といわれている¹⁾。

カルチノイド(定型的、非定型的)、小細胞癌、LCNECがある。

混合型も知られているが、扁平上皮癌と小細胞癌の症例²⁾や腺癌、扁平上皮癌、LCNECの症例³⁾など限られた報告しかない。

胸腺癌でも神経内分泌マーカーが部分的に陽性になることが知られており、形態像等をふくめて総合的に判断する必要がある。

1) W.D. Travis et al., WHO Classification of Tumours of the Lung, Pleura, Thymus and Heart, International Agency for Research on Cancer, Lyon, 2015

2) 向井資正ら, 胸腺原発混合型癌の1例, 2003, 胸部外科, 56, 509-512

3) 町野隆介ら, 大細胞神経内分泌癌成分を含む混合型胸腺上皮性腫瘍の1例, 2012, 日呼外会誌, 26, 762-767

【胸腺の原発性内分泌腫瘍】

Table 3.07 Classification of thymic neuroendocrine tumours

Low-grade	Intermediate-grade	High-grade	
<p><i>Typical carcinoid</i></p> <ul style="list-style-type: none"> • No necrosis • < 2 mitoses per 2 mm² (mean: 1 per 2 mm²) 	<p><i>Atypical carcinoid</i></p> <ul style="list-style-type: none"> • Necrosis present and/or • 2–10 mitoses per 2 mm² (mean: 6.5 per 2 mm²) 	<p><i>Large cell neuroendocrine carcinoma (LCNEC)</i></p> <ul style="list-style-type: none"> • Non-small cell cytology • Neuroendocrine markers • > 10 mitoses per 2 mm² (mean: 45 per 2 mm²) • Frequent necrosis 	<p><i>Small cell carcinoma</i></p> <ul style="list-style-type: none"> • Small cell cytology • > 10 mitoses per 2 mm² (mean: 110 per 2 mm²)
<p>Morphological variants</p> <ul style="list-style-type: none"> • Spindle cell type • Pigmented type • With amyloid • Oncocytic/oxyphilic type • Mucinous type • Angiomatoid type • Combinations of the above variants 		<p>Combined large cell neuroendocrine carcinoma</p> <p>(with adenocarcinoma, squamous cell carcinoma, or spindle/giant cell carcinoma)</p>	<p>Combined small cell carcinoma</p> <p>(with LCNEC, adenocarcinoma, squamous cell carcinoma, or spindle/giant cell carcinoma)</p>

3) 町野隆介ら, 大細胞神経内分泌癌成分を含む混合型胸腺上皮性腫瘍の1例, 2012, 日呼外会誌, 26, 762-767

【胸腺原発のLCNEC】

胸腺原発内分泌腫瘍の14～26%

小細胞癌の形態はみられず、索状配列、核の柵状配列、ロゼット形成などがみられ、分裂像の増加(10以上/10hpf)、壊死も認めるもの。

Synaptophysin、Chromogranin A、CD56の陽性率は50%を超えることが多い。

CD5陽性例の報告はなく、扁平上皮癌との鑑別に有用である。

【胸腺原発の小細胞癌】

内分泌腫瘍の10%。

小細胞癌の形態を示せば、免疫染色等の所見は問わない。

肺原発腫瘍との鑑別にTTF-1が有用な可能性はあるが、十分な解析がなされたわけではない。

【まとめ】

- ・胸腺腫瘍を経験した。
- ・形態像や免疫染色所見から、胸腺原発の混合型小細胞癌と考えた。

【疑問点】

- ・LCNEC等の成分もあると考えて問題ないでしょうか？
- ・混合型小細胞癌の取り扱いが肺癌と同様に扱えばよいのでしょうか？